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PACIFIC PULP *and* PAPER INDUSTRY

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Number 11

OCTOBER, 1929

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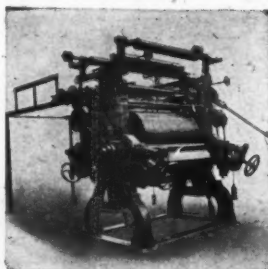


Copyright by F. W. Hooper

OCEAN FALLS, BRITISH COLUMBIA

An extensive program, improving both hydro-electric and steam power facilities of this, the Pacific Coast's "farthest north" mill, is now being carried out.

Waldron Multi-Tone Intaglio
Printing Machine.



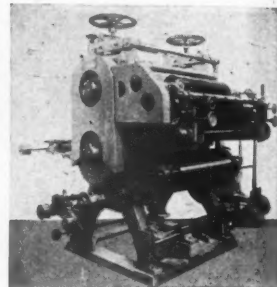
Waldron 6-Color Surface
Printing Machine.



Waldron Mechanical Festooning
for Economical Air
Drying.



Waldron Closed Front Embossing
Machine with Inking
Attachment.



Machines Designed and And Built For

*the exacting requirements of the modern
advanced methods in paper converting*

Waldron machinery has been one of the chief factors in building the paper converting industry from its inception. And for over a hundred years, Waldron engineering has kept in step with the industry's constant advance. To Waldron machine design and construction must be given a large share of the credit for many of the outstanding present day developments in processing and production.

With new products and new processed effects constantly being considered, it is natural that Waldron engineers are so often consulted regarding machinery requirements. Waldron's century of experience and knowledge in this field has often assisted plant executives to prevent huge waste of time and money in the planning of their production, processing and equipment.

"If It's For Paper Converting—Consult Waldron"

IS ALWAYS A STANDING INVITATION TO THE INDUSTRY

Use the Advisory Service of Our Converting Specialists. Helpful data and technical information is available through our engineering service department.

JOHN WALDRON CORPORATION

Main Office and Works: NEW BRUNSWICK, N. J.

NEW YORK
122 East 42nd St.

CHICAGO
208 W. Washington St.

PORTLAND, ORE.
519 American Bank Bldg.

WALDRON

Paper Converting Machinery

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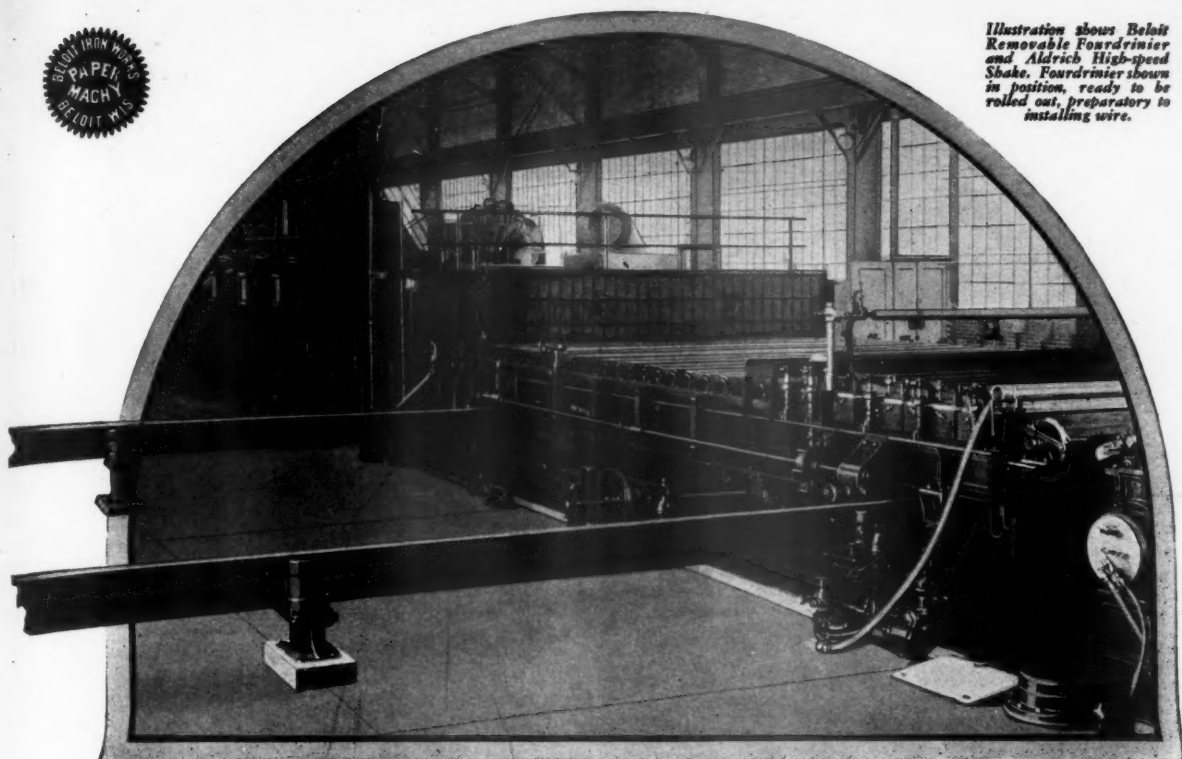


Illustration shows Beloit Removable Fourdrinier and Aldrich High-speed Shake. Fourdrinier shown in position, ready to be rolled out, preparatory to installing wire.

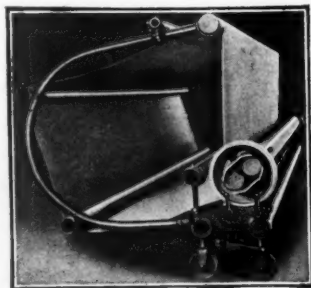
What price FOURDRINIER?

THE Fourdrinier is the most expensive and delicate equipment of your entire paper mill. You can't afford to abuse it.

Yet, some mills still change wires like they used to a decade ago, thus constantly subjecting the Fourdrinier to dangers that an insurance underwriter would pronounce most hazardous.

With every wire change the entire fourdrinier part must be dismantled and re-assembled, and the heavy, expensive parts lifted and carried by men. What if they should drop a part occasionally? You can't pass up the fact that this method of handling breast rolls, table rolls, suction boxes, savealls, bearings and other expensive parts is bound to result in costly damage. And then you have the further problem of getting the machine into perfect alignment.

Have you contrasted this with the modern way of changing wires on the Removable Fourdrinier?



The Beloit patented wire carriage makes the transferring of the wire to Fourdrinier a simple and quick operation. Wire is draped into position on carriage and used as a "spare," always ready for action.

The Removable Way is the Easiest Way
BELOIT IRON WORKS, BELOIT, WIS., U. S. A.

The BELOIT

When writing to BELOIT IRON WORKS please mention PACIFIC PULP AND PAPER INDUSTRY

150 Pounds Pressure



CRANE VALVES



2500 Pounds Pressure



Radiator valve 112

Radiator valve 113



This new line of low type radiator valves, Nos. 112, and 113, will perform all the duties of steam radiator service in an unusually accurate and satisfactory way.

A new radiator valve

Crane Co. now offers to contractors a better channel of profit and an easier fitting to install... to the public, better and more efficient service... in this new line of radiator valves.

The points of design which substantiate this statement are:

Easier to install and repair—the bonnet has unusually convenient wrench flats. The renewable disc is held firmly against the forged brass slip on disc holder by means of a brass washer and nut.

Unusual strength and reliability—counterpieces, disc holders, tailpieces, tailpiece rings, and packing nuts are of forged brass.

Long service—packing rings in stuffing box are of braided asbestos.

Ease in operation—a molded composition handwheel connected to the top of the rolled brass stem responds instantly to force applied on it, and eliminates the danger of burned fingers.

Attractive—low and compact in type, this line of valves is unusually pleasing to the eye.

With their inheritance of the 74 years Crane prestige, their mechanical perfection and their appearance, this new line of radiator valves cannot help but conquer... create sales for piping contractors and make new friends for them.

CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO

NEW YORK OFFICE: 23 W. 44TH STREET

Branches and Sales Offices in One Hundred and Eighty Cities

When writing to CRANE CO., please mention PACIFIC PULP AND PAPER INDUSTRY.

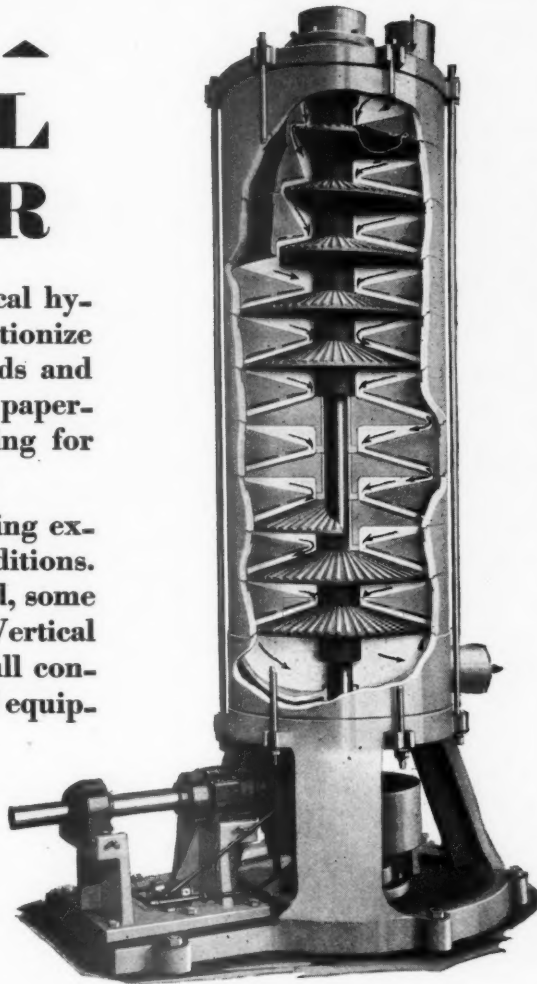
▲ *This is the Fritz* ▲ VERTICAL HYDRATOR

Rumors of the development of a vertical hydrator, a machine destined to revolutionize present refining and hydrating standards and constituting a major improvement in paper-making equipment, have been circulating for several months. *These rumors are true.*

This new machine has been undergoing exhaustive tests under actual working conditions. Comparative figures have been compiled, some of them have been disclosed. The Fritz Vertical Hydrator is now offered for sale with full confidence in its ultimate destiny as standard equipment in all progressive mills, marking a definite step forward in the science of paper making.

Efficiency in operation, economy, ultra-speed, and the highest standards of refining and hydration, accentuated beyond the hope of any other type of beater, are proven and provable attributes of the Fritz Hydrator.

The Hydrator is the result of a lifetime study of paper making methods and machinery. It is the result of a definite conclusion that in this step of the process the paper is born, for better or for worse. It is desired to present to the trade full information about this revolutionary step in paper manufacture, and to this end correspondence is invited.



The Hydrator consists of ten discs mounted on a vertical shaft and running opposite ten stationary discs mounted on the inside wall of the cylinder. The movable discs have 59 tapering bars 9 inches long. The stationary plates have 52 similar bars. The discs travel at a speed of 300 R. P. M. The pulp enters at the top, emerges at the bottom in a continuous stream. The action, which is adjustable, is entirely a brushing one. No fibres are cut.

The floor space is about 7 feet by 4, and the hydrator stands 12 feet high. It is constructed of either iron and steel or bronze for hard, constant use with continuity of production paramount. It is noiseless, requires no attention when in operation.

Fully covered by patents and patents pending in U. S. and foreign countries

VERTICAL HYDRATOR COMPANY

*Pulp and Paper Mill
Machinery and Supplies*

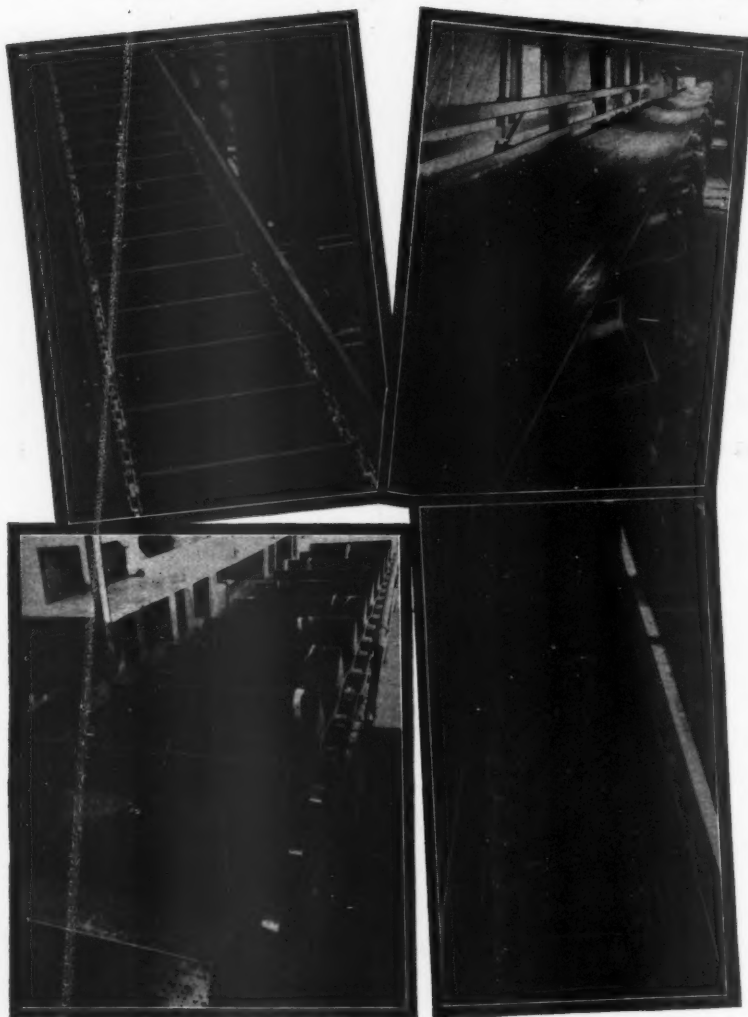
General Offices: Tribune Building

Chicago, Illinois

"Hydration", a booklet of scientific facts by an expert, is in preparation. Your request will assure you an early copy.

LINK-BELT Hogged Fuel Conveying System

Powell River Co., Ltd., Powell River, B.C.



THIS installation is the largest and most comprehensive system of conveyors for handling, storing and recovering hogged fuel, that has ever been installed in the West.

In the layout are incorporated *four distinct types of conveyors*, illustrated at the left. All of these are designed along what might be termed orthodox lines, yet each has features which make it adaptable to the efficient handling of hogged fuel.

In designing this equipment every effort was made to insure getting the hogged fuel to the boilers, regardless of any shutdown of the individual units.

Link-Belt power transmission equipment—Silent Chain Drives, Link-Belt Herringbone Speed Reducers and "RC" Roller Chain Drives, operate the conveyors with the highest degree of efficiency.

If you have an elevating, conveying or power transmission problem put it up to Link-Belt experienced engineers.

Address the nearest office.

Conveyors for Hogged Fuel

Upper Left: Flight conveyor using double strand of Link-Belt No. 678 >RIVETLESS< chain with swivel attachments and wood flights spaced every 36".

Lower Left: Gravity-Discharge Elevator-Conveyor using double strand of 18"

pitch Link-Belt SS-4055 Chain, with 54" x 24" buckets spaced every 36".

Upper Right: Inclined Link-Belt Anti-Friction Belt Conveyor, 42" wide, 390-ft. centers.

Lower Right: Link-Belt H-120 Chain Conveyor, using one strand of chain.

LINK-BELT COMPANY

3657-A

Leading Manufacturers of Elevating, Conveying, and Power Transmission Chains and Machinery
CHICAGO, 300 W. Pershing Road

INDIANAPOLIS, 200 S. Belmont Ave.

PHILADELPHIA, 2045 W. Hunting Park Ave.

LINK-BELT MEESE & GOTTFRIED COMPANY

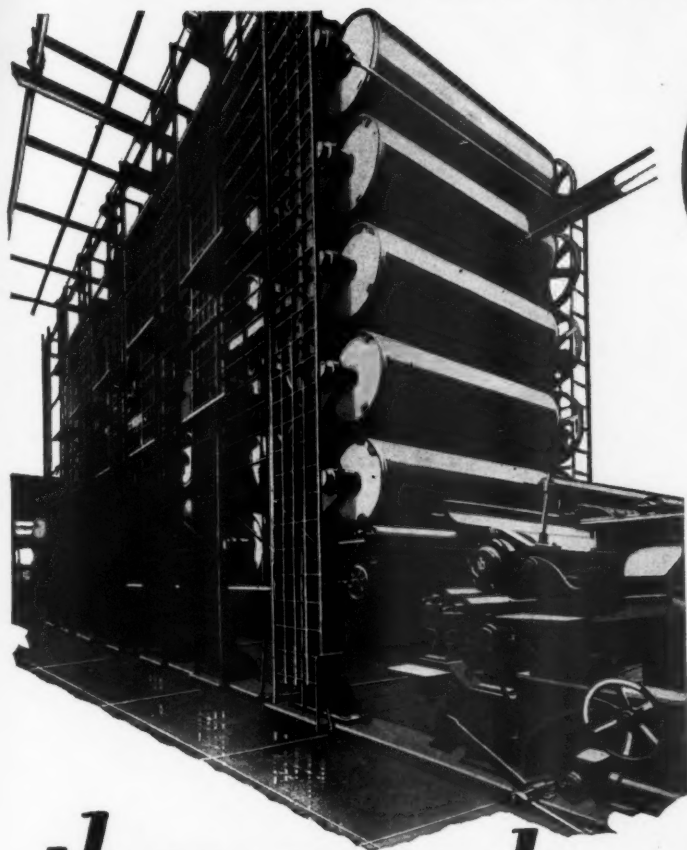
San Francisco.....19th and Harrison Sts.
Portland, Ore.....

Los Angeles.....361-369 S. Anderson St.
67 Front St.

Seattle.....820 First Ave. S.
Oakland.....526 Third St.

LINK-BELT

When writing to LINK-BELT COMPANY please mention PACIFIC PULP AND PAPER INDUSTRY



*They're
saving
their
owners*

*thousands of dollars
every year —*

*Vertical Dryers on all three machines at
the Richardson Company, Lockland, Ohio*

This mill started with a "try-out" installation some twelve years ago. Since then they have equipped all three of their machines with Vertical Dryers. They are operating today with a grand total of 232 rolls in Vertical order.

Obviously the Richardson Company is "sold" on Vertical Dryers—otherwise why would they make them standard equipment on all three of their machines? The answer follows:

They were able to increase their drying capacity

without taking over additional floor space. They were able to eliminate the vapor pockets between the rolls, dry faster, dry more uniformly from edge to edge, and do it on considerably lower steam pressure.

They were able to save money on their coal bills because of the reduced steam pressure required. Have us figure on increasing the capacity of your dryer section. The benefits will soon pay the bill. dryer section. The benefits will soon pay the bill.

THE BLACK-CLAWSON COMPANY, HAMILTON, OHIO

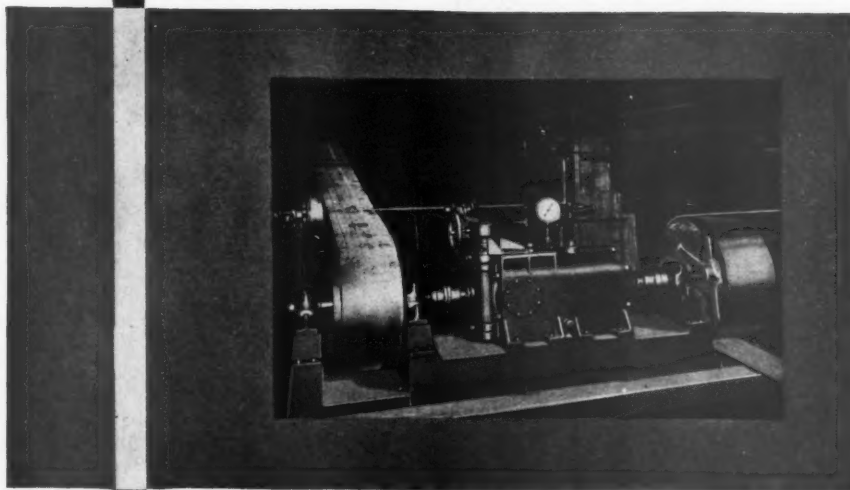
Operating Shartle Brothers Machine Co., Middletown, Ohio
Export Office: 15 Park Row, New York City

BLACK-CLAWSON
VERTICAL  DRYERS

Built with Machine-Tool Accuracy

When writing to BLACK-CLAWSON Co. please mention PACIFIC PULP & PAPER INDUSTRY

STEADY 24-hour-day service



~ and no **FAILURES**



*Let our engineers work
with yours—with lower
costs and improved per-
formance the objectives.*

This Waterbury Hydraulic Variable Speed Transmission is on the drive of a 108-inch 5-cylinder Board Machine. It is one of hundreds of installations of the Waterbury Drive—in paper mills and other industrial fields—made by the Waterbury Tool Company of Waterbury, Conn. In all the years during which NORMA-HOFFMANN Precision Bearings have been used by this manufacturer in his units, there has been not one complaint of the service rendered—even where (as in most paper mill service) the demand is for 24-hour-per-day duty.

PRECISION—and all it stands for in the essentials of true value in bearings—reveals itself most conspicuously where the operating conditions demand continuous service, 24 hours a day, week after week. Here price differences are quickly wiped out in increased production, lower maintenance, freedom from shut-down losses. Serviceability—that's the quality by which to measure and compare, bearings.

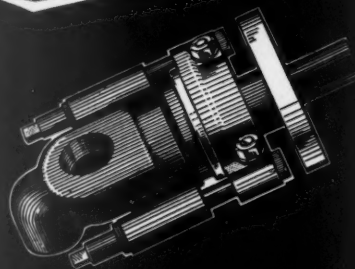
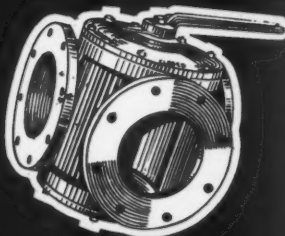
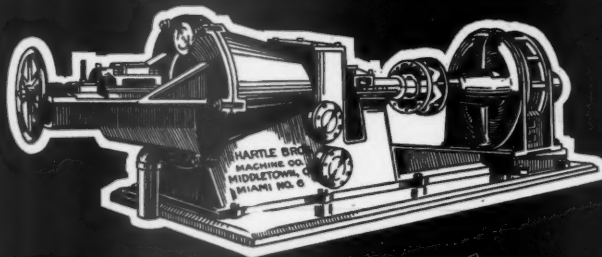
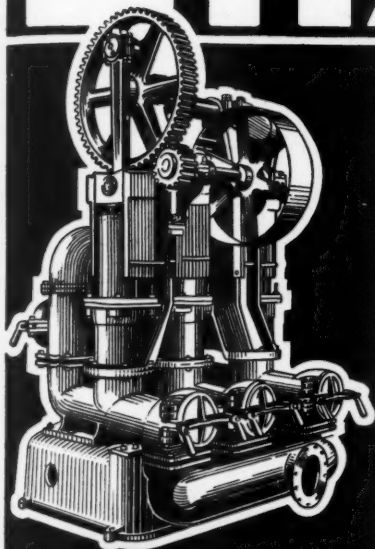
NORMA-HOFFMANN **PRECISION BEARINGS**

N-1022

NORMA-HOFFMANN BEARINGS CORPORATION STAMFORD, CONN., U.S.A.

When writing to NORMA-HOFFMAN BEARINGS CORP., please mention PACIFIC PULP AND PAPER INDUSTRY

SHARTLE

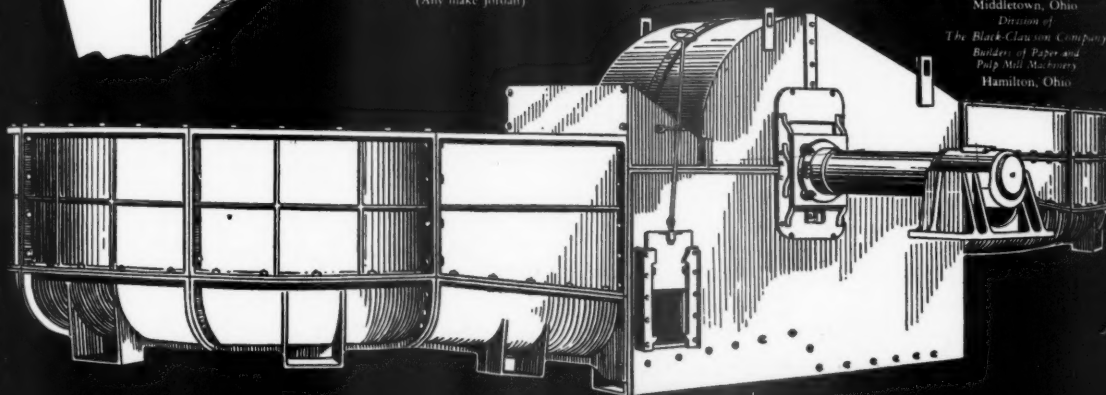


SHARTLE BROTHERS—Builders of practically everything in the way of paper mill equipment—and the logical Company to write to when in need. Run down the list. Perhaps there is something to prompt an inquiry yet today.

Agitators
Beater Rolls
Breaker Beaters
Brownell Buchler Perforated Backfall
Bull Dog Jordan Fillings
(For any make Jordan)
Calendars
Centrifugal Pumps—Stock and Water
Collapsible Winder Shafts
Continuous Beating Systems
Copper Covered Felt Rolls
Couch Rolls
Cutters
Cylinder Molds
Cylinder Paper Machines
Dryers
Flexible Couplings
Fly Bars
Griley-Unkle Extractors
Griley-Unkle Color Systems
Griley-Unkle Roll Raisers
Hardinge Rod Mills
Jordan Fillings
(Any make Jordan)

Miami Jordans
Miami Wet Machines
Multiple Fan Pumps
Murphy Junk Removers
Oilless Packing Boxes
Pasters
Press Rolls
Quick Opening Valves
Rag Catchers for Beaters
Reels
Rewinders
Saturating Machines
Save-Alls
Screens
Shartle Stuff Pumps
Shower Pipes
Slitters
Stuff Pump Balls
Tailing Screens
Thickeners
Tyler Tub Washers
Winders
Wood and Copper Covered Felt Rolls

Shartle Brothers Machine Company
Middletown, Ohio
Division of
The Black-Clawson Company
Builders of Paper and
Pulp Mill Machinery
Hamilton, Ohio



ANNOUNCING

the

CENTRIFUGAL ENGINEERING AND PATENTS CORPORATION

The purifying and preparation of paper making fibres by centrifugal force, the biggest new development in paper making, is creating new standards of paper quality. Paper machine stuff so treated makes the cleanest and strongest paper ever known. In order to make this new process more widely available to the industry, the recently organized Centrifugal Engineering and Patents Corporation has purchased the patents under which the Erken-sator formerly was manufactured and will devote itself exclusively to the

further development of the principles of centrifugal stuff purification.

Licenses for the use of its patents have been granted to the Bird Machine Company, South Walpole, Mass., and to the Tolhurst Machine Works, Troy N. Y.

The day of almost-clean paper is over — learn the advantages of centrifugal separation before your competitors' success calls it more forcibly to

your attention.
Centrifugal Engineering and Patents Corporation, 15 Exchange Place, Jersey City, N. J.



**FOR THE CLEANEST PAPER THAT CAN BE MADE
USE CENTRIFUGAL SEPARATORS**

For Increased Production in Cutter Rooms Use "M&W" Cutters, Lay Boys, Backstands

BUILT TO ENDURE

It's a Moore & White Installation.....



The picture shows thirty-roll Backstand used in connection with Moore & White 130-inch Duplex Cutter and Lay Boy. Cutter equipped with seven pairs of slitters and the Lay Boy arranged to lay six piles of paper. Backstand is loaded with thirty rolls of 14-lb. fruit wrapping paper, each roll weighing 2000 pounds. This is one of three installations . . . all in the same mill. Name of mill on application.

FIRST CHOICE ALWAYS

(95% of all Paper Mills in U.S. use "M & W" Lay Boys)

Catalog No. 1 on Request



When writing to THE MOORE & WHITE CO., please mention PACIFIC PULP AND PAPER INDUSTRY.

FELT ECONOMY ♦ ♦ **THE RESULT OF PROGRESSIVE, SCIENTIFIC DEVELOPMENT IN**

KENWOOD TANNED FELTS

KENWOOD RESEARCH has achieved advances in felt design and construction that produce today's conception of true felt economy.

Kenwood pioneered the one-sided board felt. This same research service developed and perfected the Kenwood tanning processes which have added immeasurably to the life and satisfactory performance of all types of felts.

Now felts enter a new phase of economical performance through entirely new method of yarn construction. Today's Kenwood felts—thanks to the Kenwood tanning processes and Kenwood yarn manufacture—offer greater and more enduring openness, longer life, superior finish and quicker running, and all these advantages without increasing size or weight of yarn.

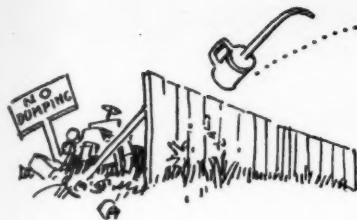
F. C. HUYCK & SONS

KENWOOD MILLS, ALBANY, NEW YORK

KENWOOD MILLS LTD., ARNPRIOR, ONTARIO, CANADA

KENWOOD FELTS



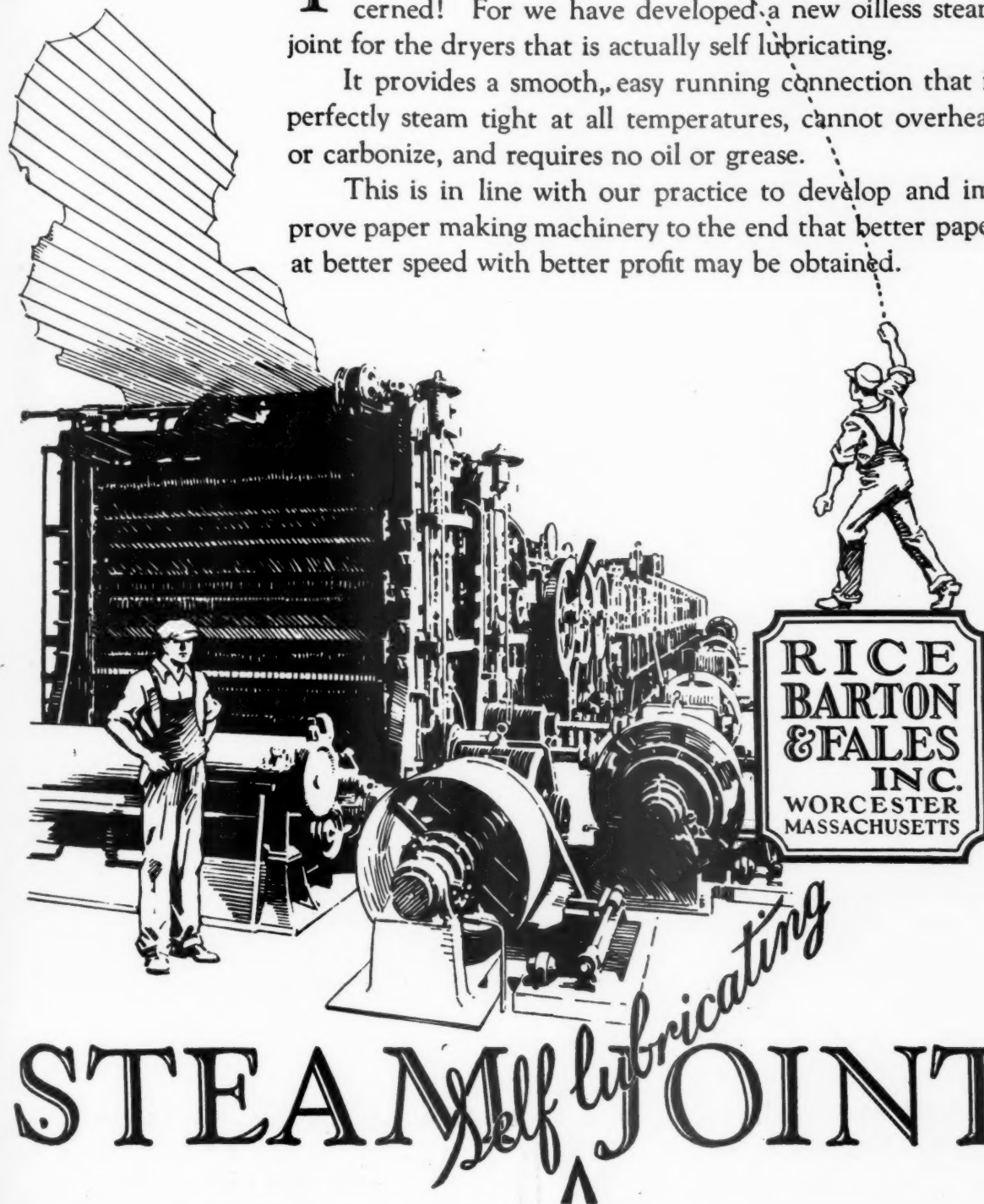


A new Rice Barton Steam Joint that is self lubricating

THROW away the oil can as far as steam joints are concerned! For we have developed a new oilless steam joint for the dryers that is actually self lubricating.

It provides a smooth, easy running connection that is perfectly steam tight at all temperatures, cannot overheat or carbonize, and requires no oil or grease.

This is in line with our practice to develop and improve paper making machinery to the end that better paper at better speed with better profit may be obtained.



STEAM JOINT

When writing to RICE, BARTON & FALES, INC., please mention PACIFIC PULP AND PAPER INDUSTRY

CLEAN



THE TOLHURST CENTRIFUGAL

TOLHURST MACHINE

New York Office:
30 Church St.

PAPER

NOW—with the introduction of the TOLHURST CENTRIFUGAL for paper and pulp purification, the day of truly clean paper is here.

This machine removes all foreign matter from the stuff, no matter how minute in size. No metal—no grit—no rubber—no cork — nothing but completely refined stuff can go on the wire.

In addition to this purification which is hundreds of times more effective than a riffler, the TOLHURST so prepares the fibres that definite improvement in formation and closing of the sheet results.

TOLHURST, in this machine, brings to the paper industry the same specialized knowledge of centrifugal engineering that has made the name TOLHURST a synonym for excellence in the Chemical, Textile and other industries.

WORKS, INC., TROY, N. Y.

**Chicago Office:
8 So. Dearborn St.**

DESIGNED
AND BUILT BY
SPECIALISTS

PAPER MILL MACHINERY

JORDAN ENGINES—PUMPS—"RAINSTORM" SHOWER PIPES

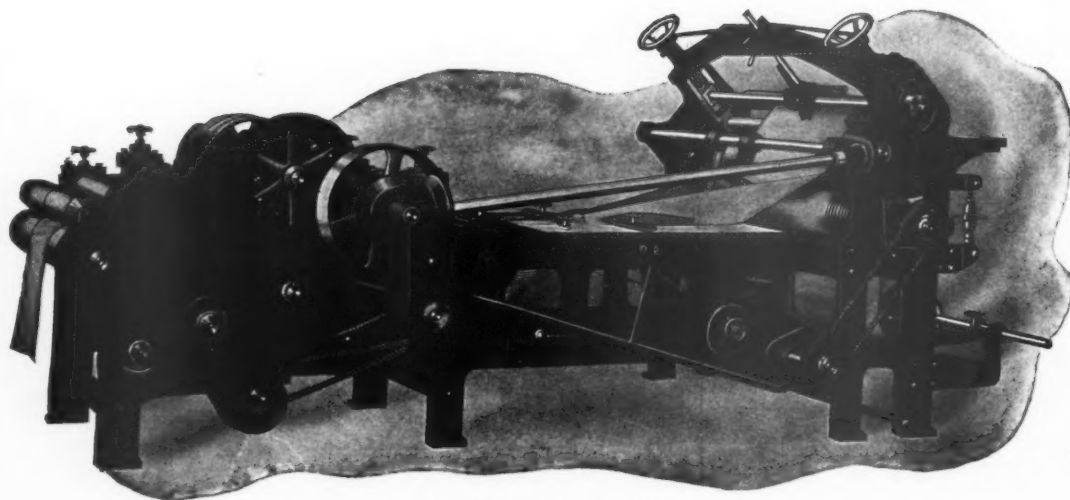
*Birdseye View
of Our
Modern Plant
Where
We Design and
Build Machinery
for the Paper
Mill*



Fourdrinier
Cylinder
Wet
Machines

The Undercut Trimmer

PAPER BAG MAKING MACHINERY



Our Heavy Duty Tuber

—ESTABLISHED 1828—

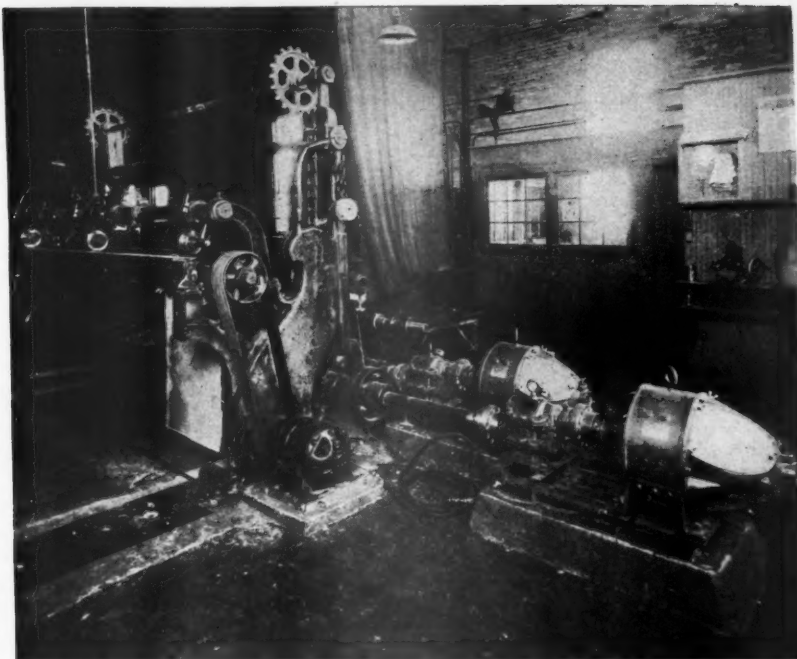
The Smith & Winchester Mfg. Co.

Dept. MFP.

SOUTH WINDHAM, CONN.

When writing to SMITH & WINCHESTER MFG. CO. please mention PACIFIC PULP AND PAPER INDUSTRY

Westinghouse-Nuttall
single-reduction units on
a modern winder drive.



Meeting the Requirements of Modern Winder Drives

WINDER drives must operate smoothly and evenly to give the best quality of paper rolls and to keep rejections to a minimum. That's an important reason why Westinghouse-Nuttall speed reducers should be specified for the necessary power transmission requirements on these drives.

In these units, the use of helical gears, running on Timken bearings in a continuous bath of oil, positively gives an even and vibrationless flow of power. This is secured as long as the gears last because helical gears, even when worn, still have their correct tooth form. The fact that these gears have been heat-treated by the BP "tough-hard" process is positive assurance of exceptionally long life and trouble-free operation.

Not only on winders, but wherever smooth, steady and continuous power transmission is required, Westinghouse-Nuttall units will do the job with satisfaction and economy.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
NUTTALL WORKS

PITTSBURGH, PENNSYLVANIA

SALES OFFICES AND SERVICE SHOPS IN ALL PRINCIPAL CITIES



Westinghouse

T 30728

Serves the Paper Industry with . .

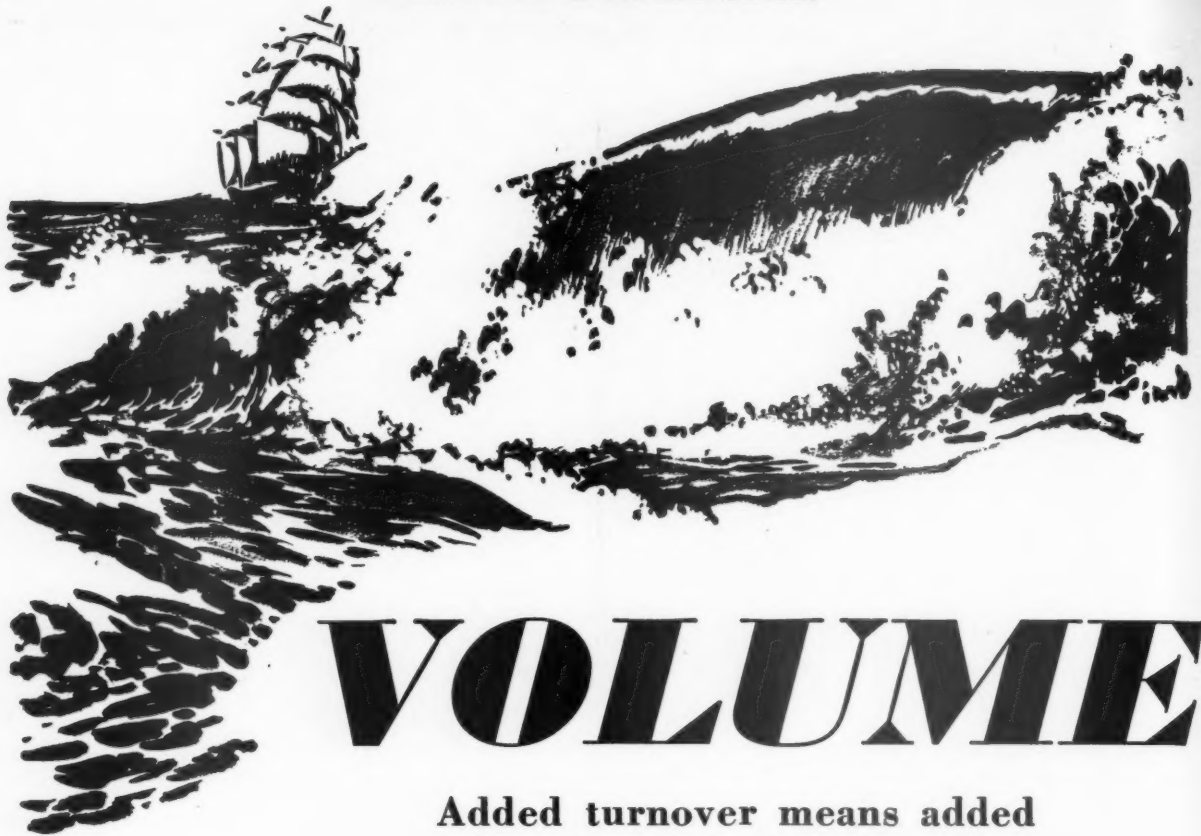
Arc-welding Equipment
Automatic Electric Babbitt Pots
Babbitt and Solder
Circuit-breakers
Electric Locomotives
Fans
Instruments and Meters
Insulating Materials

Lighting Equipment
Lightning Arresters
Line Materials
Mazda Lamps
Micarta Gears
Motors and Control
Panelboards
Power Plant Equipment

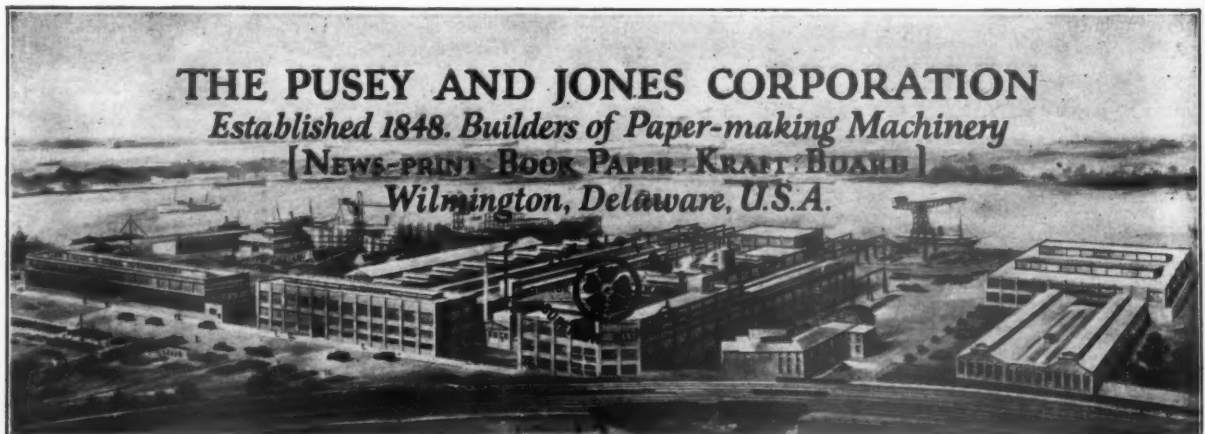
Safety Switches
Sectional Drive Equipment
Speed Reducers
Stokers
Switchboards
Transformers
Turbine-generators
Voltage Regulators

Canadian Agents:
Lyman Tube & Supply Co.

When writing WESTINGHOUSE ELECTRIC & MFG. CO., please mention PACIFIC PULP AND PAPER INDUSTRY



Added turnover means added inches in width, added long feet per hour. These two elements of production-economics fatten volume on your floors and on the road, without adding foot-work. They put real speed into outgo of tonnage and income of hard cash. They shorten the distance between pulp and payment.



When writing to PUSEY & JONES CORPORATION please mention PACIFIC PULP AND PAPER INDUSTRY



ALLIS-CHALMERS ROD-MILLS OPERATING ON COOKED
CHIPS IN THE MANUFACTURE OF WRAPPING PAPER

Lower Operating Costs

and an

Improved

Quality of Paper

Are the results obtained with Allis-Chalmers Rod Mills used in the capacity of beaters or refiners on wood pulp and screenings.

Numerous commercial installations have fully demonstrated these facts to be worth while investigating.

*Let Us Tell You About the Rod Mill and
Its Application in the Paper Industry.*

ALLIS-CHALMERS

MILWAUKEE, WIS. U. S. A.

PACIFIC COAST OFFICES: Rialto Building, San Francisco, Calif.; Rowan Building, Los Angeles, Calif.;
115 Jackson Street, Seattle, Wash.; 505 Lumbermen's Building, Portland, Ore.; 525 Symes Building, Denver,
Colo.; 915 Kearns Building, Salt Lake City, Utah; 308 Heard Building, Phoenix, Ariz.;
619 Frost National Bank Building, San Antonio, Texas.

When writing to ALLIS-CHALMERS MFG. CO. please mention PACIFIC PULP & PAPER INDUSTRY

NOW IN STOCK

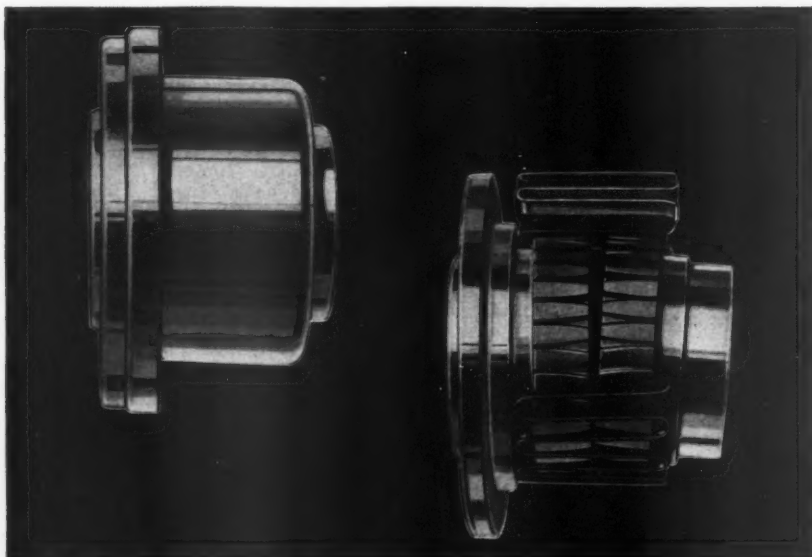
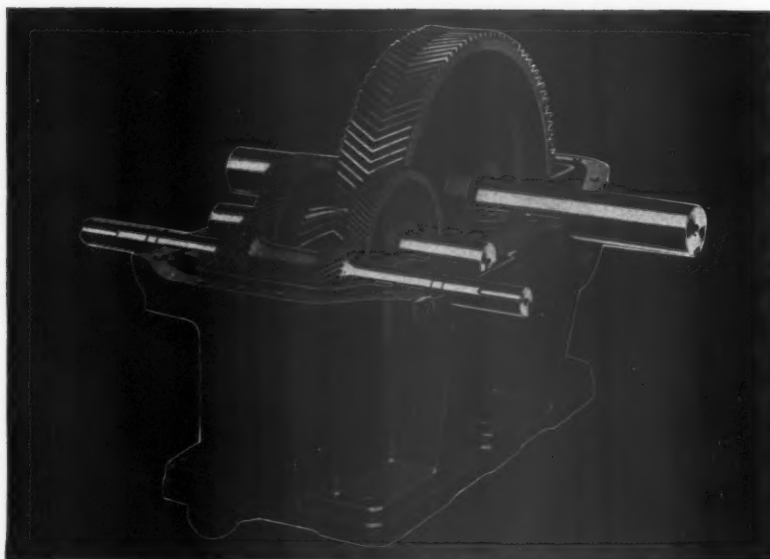
PRESCOTT becomes for FALK Couplings

FALK

Speed Reducers

The gears in Falk Speed Reducers are cut from specially prepared steel blanks by a process exclusive with Falk. The reducers are simple, compact, oil-tight, dirt-proof, noiseless, free from heat and vibration. They permit a higher ratio of reduction per gear and have less friction losses than any other type.

Excessive capacity makes it unnecessary to buy oversize reducers. Symmetrical arrangement allows equal pressure on bearings and prevents uneven wear and misalignment. All wearing parts are interchangeable and renewable. Lubrication is by patented splash system. In the Falk speed reducer you have precision bearings automatically oiled, and alloy steel shafts. Highest efficiency is maintained throughout life of reducer.



FALK

Flexible Couplings

Only Falk Flexible Couplings meet all the requirements of the ideal coupling. They are torsionally and laterally resilient; made entirely of metal; are amply lubricated; shock-absorbing — and provide for angular and parallel misalignment.

Falk Flexible Couplings are easy to connect and disconnect. They provide wide distribution of pressure and are correctly lubricated. Under load they float freely. Shocks and vibrations are absorbed and operation is equally good in both directions.

When writing THE FALK CORP., please mention PACIFIC PULP AND PAPER INDUSTRY.

AT SEATTLE!

Factory Distributor and *Speed Reducers!*

The Prescott Company, Menominee, Michigan, and Seattle, Washington, is, with this announcement, discontinuing the manufacture of PRESCOTT Gear Reduction Drives, and becoming direct factory distributor for FALK Speed Reducers and Flexible Couplings.

A most thorough investigation preceded this announcement, and The Prescott Company feels that the change will enable it to render a service to its many customers that will be even more satisfactory than ever before.

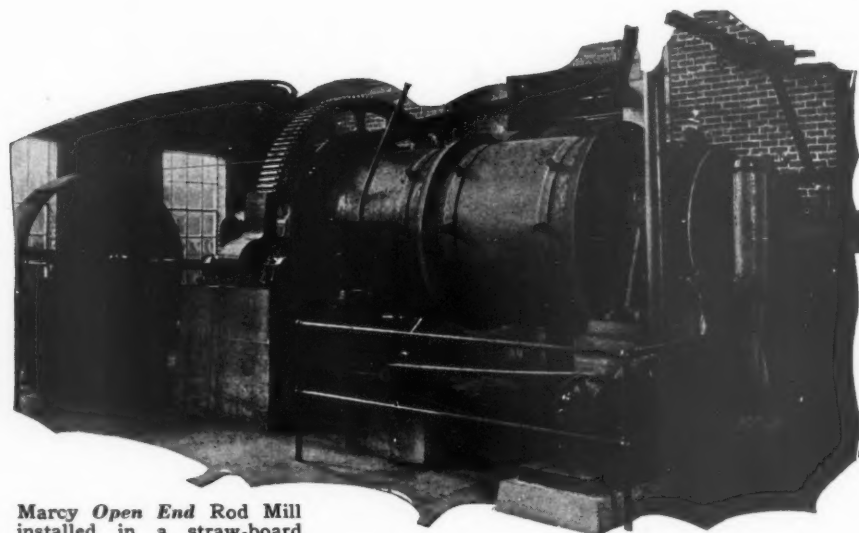
A complete stock of FALK Speed Reducers and Flexible Couplings will be carried at the Prescott Seattle plant ready for immediate shipment. Large stocks in Milwaukee are always available for quick service for all lines of industries.

The Prescott Company, with its long experience in the design and manufacture of speed reducers, together with its fully equipped Seattle plant, is unusually well qualified to render an efficient and valuable service in marketing FALK Speed Reducers and Flexible Couplings. Service on the Prescott drives now in operation will also be maintained.

THE FALK CORPORATION

MILWAUKEE, WISCONSIN

When writing THE FALK CORP., please mention PACIFIC PULP AND PAPER INDUSTRY.



Marcy *Open End* Rod Mill installed in a straw-board plant. A unit of this size will do the work of several beaters.

Capacity Assured for Rod Mill Beating

--- *Let's talk about
capacity of rod mills*

CAPACITY must be such as to make it a distinct advantage to use one rod mill unit as against a battery of batch beaters. Also, the estimated capacity must be at least attained, if not exceeded.

Assured capacity is one feature of the Marcy *Open End* Rod Mill. Without exception all the units installed have fulfilled capacity requirements.

This emphasizes not only the soundness of the mill design itself, but the knowledge Marcy men have of beating requirements and the conservativeness of their recommendations.

The capacity you want will be assured when you beat with the Marcy *Open End* Rod Mill.



The **MINE and SMELTER
SUPPLY COMPANY**

NEW YORK, 225 Broadway

DENVER

Licensee under the Marcy Rod Mill Patents

Manufactured in Canada by William Hamilton Limited
Peterborough, Ontario

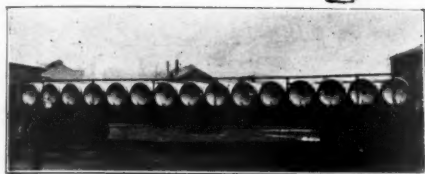




CHLORINE

Liquid CHLORINE

to Meet Your Requirements



LIQUID CHLORINE TANK CAR
Multi-Unit Ton Containers



LIQUID CHLORINE TANK CAR
16 Tons



LIQUID CHLORINE TANK CAR
30 Tons

Ample stocks and complete tank car and cylinder equipment at both of our plants assure prompt and efficient deliveries to all sections of the country.

The advice and experience of our technical and engineering staff are at your service. We solicit your inquiries and welcome the opportunity to assist you.

HOOKER ELECTROCHEMICAL COMPANY

EASTERN SALES OFFICE:
25 Pine St., New York City
Plant, Niagara Falls, N. Y.

WESTERN SALES OFFICE:
Tacoma, Wash.
Plant, Tacoma, Wash.

Accurate Equipment for Testing the Moisture of Your Pulp Will Save You Thousands of Dollars

THE WILLIAMS STANDARD PULP TESTING OUTFIT

Conforms in every detail with the Official Method for the Sampling and Testing of Pulp as approved by the Technical Association of the American Pulp and Paper Industry, the Canadian Pulp and Paper Industry, the American Woodpulp Importers Association, etc.



*New Horizontal Model
Work-Table Top, Separate Compartments, Quicker Drying*

FEATURES

OVEN—Double walled, electrically heated, with thermostat control.

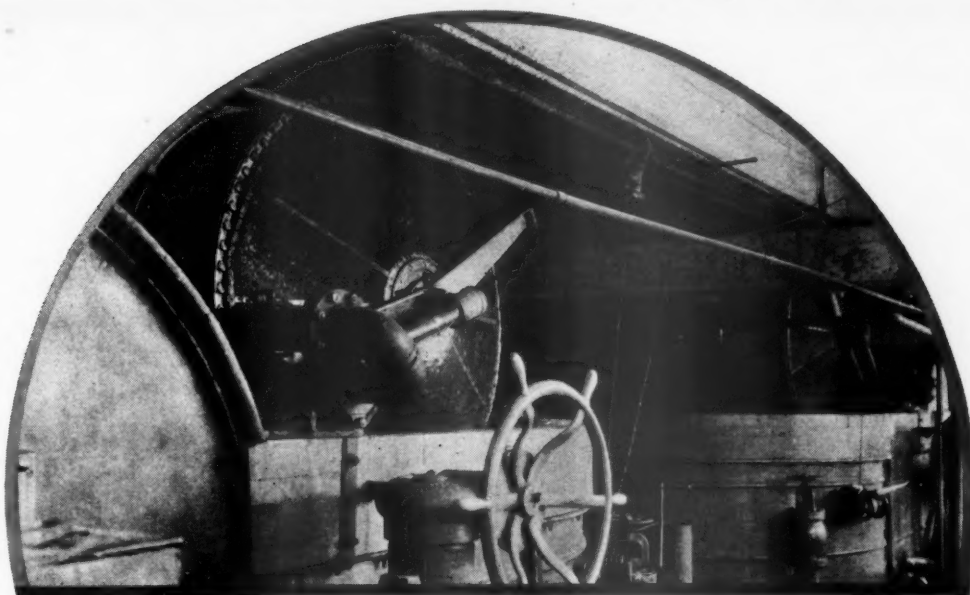
SAMPLE TRAYS—Removable for weighing hot samples while covered.

THERMOMETERS—High grade six-inch dial form, one in each compartment.

SCALES—Accurate balances with brass weights, counterpoised tray holder and cover.

It will pay you to write today

THE WILLIAMS APPARATUS CO., Park Place, Watertown, N.Y.



Dilts Siphon Washers operating
in the kraft mill of the Long-
view Fibre Company, Longview,
Washington

Take a Look! at these **DILTS SIPHON WASHERS**

Operate on a new principle. Dirty water is removed by siphon action. There are no buckets or dippers, no gears or sloppy discharge spouts, no power used in lifting the water. A friction clutch pulley is used for starting and stopping. The narrow cone shaped discs permit submerging the washer discs close to the bottom of the tub so that the stock in the bottom is washed as well as the stock near the surface. The large area of the discs provides greater screening surface in contact with the stock. The rate of washing may be varied at will.

The power required to operate is negligible. Built in single, double or triple discs these washers solve many washing problems, increase production on stocks which are slow to wash and present no operating difficulties. They are simple in construction. Brass and bronze discharge outlet parts and the absence of wrought iron and steel in the construction of the washer eliminate many troubles from corrosion, lime deposits, etc.

Used in connection with New Type beating engines very satisfactory savings of time, power and beater room costs are effected. Reduce beating time, improve quality, save floor space and labor by installing this modern equipment.

Full information gladly furnished on request.

DILTS MACHINE WORKS, Inc.
FULTON, N. Y.

"Your Paper is Made in Your Beaters"



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We act as sales agents and distributors for the entire output of Sulphite and Kraft Producing Mills.

Paper Distributors

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NEW YORK

Pacific PULP & PAPER INDUSTRY

THE PACIFIC COAST JOURNAL FOR PRODUCERS, CONVERTERS,
AND DISTRIBUTORS OF PULP, PAPER, AND BOARD.

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Vol. 3

OCTOBER, 1929

No. 11

Prosperity—There's a marvelous era ahead for the Pacific

By FRED WESLEY SARGENT, President
Chicago & Northwestern Railway

[Editor's Note—President Sargent came all the way from Wisconsin to address 700 earnest men from every phase of industry at the Pacific Northwest Advisory Board meeting in Seattle, September 20. The Northwestern's steel does not penetrate Pacific Northwest territory, but it does criss-cross the one-time great forest states of Wisconsin and Minnesota. Mr. Sargent's views, presented here in abstract, have the valuable seasoning of perspective and a farsightedness developed thru directing the affairs of one of America's great railroads.]

RAILWAY managements have begun to sense the vast and rapid growing importance of traffic in this North Pacific country. I am satisfied that a marvelous era of prosperity is ahead of it, and that that era has only begun.

There are a billion mouths to feed across the Pacific, in lands socially disorganized and far behind the modern in scientific and mechanical development. Commerce is the world's greatest diplomat. Raise Oriental purchasing power \$10 per capita per year and a \$10,000,000,000 market is added.

But we in the prairie states come with a kindly word of caution. If you are to build a permanent export trade, a permanent industrial prosperity for these Northwest states, now is the time to lay the foundation for all time to come.

It is dangerous to speak in terms of conservation of natural resources. The federal oil survey of 1922 predicted exhausted supplies by 1934. New methods, new discoveries, have changed that. It is difficult to estimate what lies under the ground.

It is not so difficult to estimate above-surface resources. Washington's original 22,000,000 acres of mar-

velous timberland have already been reduced by 6,000,000 acres. The nation's ratio of lumber consumption to reforestation is as 40 to 6. I have personally seen the forests of Wisconsin and Minnesota go. Reliable estimates give Washington another 35 years of production before exhaustion at present scale production.

What does that mean? Your population is 44 per cent dependent on timber industries. Timber is 65 per cent of your entire payroll... Some 65 per cent of out-bound tonnage comes from the lumber industry. This vast industry could give the producers profit, with conservation of growing timber, if it could be placed on a profitable basis.

I hope you will pardon a suggestion from one who, having studied reforestation in Wisconsin, is satisfied that the time has arrived when growing timber should be taxed only as it is produced. If I had my way, I would aid conservation of all natural resources by exempting them from taxation except on a reasonable basis in accordance with production.

Railway managements fully realize the new order of economics. Permanent prosperity for the railroads requires assistance to their patrons to make them prosperous.

We are entering an era of unprecedented prosperity. I have little faith with some of the theories of the old-fashioned economists. Modern theory has jumped right over them. Modern invention, industrial organization and science have so changed aspects of want and demand that the old economics must be rewritten.

SUCCESS

Marks First Fall Meeting of Pacific Coast Section

of T.A.P.P.I.

WHEN the toastmaster finally bid "good night" at the banquet in the Crystal Ball Room of the Hotel Winthrop in Tacoma on Saturday, October 5, he marked the close of what unanimously was expressed as a satisfyingly successful first meeting of the Pacific Coast Section of the Technical Association of the Pulp and Paper Industry.

The scheduled program ran off without a hitch and with the election of new officers at a business meeting immediately following the afternoon session there was a general feeling that the Section was off to a good

start for some real constructive work. The men who will direct the affairs of the Section for the coming year are:

CHAIRMAN—R. S. Wertheimer, Resident Manager, Longview Fibre Co., Longview, Washington.

VICE-CHAIRMAN—R. Reid, Chemist, St. Helens Pulp & Paper Co., St. Helens, Oregon.

SECRETARY—Dr. H. K. Benson, Department of Chemistry, University of Washington, Seattle, Washington.

Chairman C. R. P. Cash appointed Myron Black, Inland Empire Paper Co., L. R. Wood, Union Bag & Paper Power Co., and A. H. Hooker Jr., Hooker Electrochemical Co. on a nominating committee and by a subsequent motion a unanimous ballot was cast for the slate selected.

The business session, which was fairly brief, was attended only by members of TAPPI. In accordance with a precedent set at the June organization meeting, the next meeting, which will probably be held in February, will be in the city of residence of the chairman, Longview, Washington.

A motion was adopted to hold spring and fall meetings, with the details to be left to the Section's executive committee.

Retiring Chairman Cash urged the new officers communicate with the national executive committee to the end that details may be disposed of in time to bring about formal acceptance of the Pacific Coast Section at the national meeting in New York next February.

Suggestions were also made from the floor that the regular qualifications for membership be maintained for the Section and that the regular by-laws of the national body be those to govern the Section.

Dr. Benson called attention to a remark by National President P. H. Glatfelter that the TAPPI membership was "top heavy with chemists" and that membership activities be directed more strongly to the mechanical men, steam engineers and other operatives.

The newly elected chairman, R. S. Wertheimer, spoke briefly at the evening banquet and said that he appreciated the honor conferred in his selection and hoped that constructive work could be accomplished, but admonished the listeners that everything should not be left only to the officers.

"We will need a lot of help," he said, "and hope you will do your part when called upon."

The morning session opened with about 75 in attendance to hear Mayor Newbegin of Tacoma give an address of welcome in which he emphasized the increasingly important part that pulp and paper were coming to have in the industrial life of Tacoma and the Pacific Northwest. He said that the civic authorities were cognizant of the importance of the industry and he complimented the Section for developing a body to

PROGRAM PACIFIC COAST SECTION of

T. A. P. P. I.

Roof Garden, Winthrop Hotel, Tacoma, Washington
October 5, 1929

Morning Session, 10 A. M.

Address of Welcome.....Hon. J. G. Newbegin

Response.....Mayor of Tacoma.....Frank S. Baker

.....Tacoma News-Tribune

The Objectives and Functions of T.A.P.P.I.....

.....President P. H. Glatfelter

.....Spring Grove, Pennsylvania

The Pulp and Paper Research Institute of Canada.....

.....Professor W. F. Seyer

.....University of British Columbia, Vancouver, B. C.

The Chlorine Method of Pulp Production.....W. Hirschkind

.....Great Western Electro Chemical Co., Pittsburg, Calif.

The Determination of Stack Losses in Sulfate Mills.....

.....George H. Horne

.....Western Precipitation Company, Los Angeles, Calif.

Afternoon Session, 2 P. M.

The Utilization of Pulp and Paper Mill Wastes.....

.....C. M. Baker

.....Madison, Wisconsin

Beater Control.....Arthur B. Green

.....Portland, Oregon

By Products of Pulp Woods.....Professor F. H. Thurber

.....Oregon State College, Corvallis, Oregon

Newsprint and Ink Penetration.....H. Andrews

.....Research and the Pulp and Paper Industry of Eastern

.....Canada.....E. P. Cameron

.....Forest Products Laboratory, Montreal, Canada

Pulp Mill Water Supplies.....Kenneth Shibley

.....California Filter Company, Seattle, Washington

The Effect of Varying Concentrations of Sodium

Sulphite for Sulfate Pulp.....Prof. W. L. Beuschlein

.....University of Washington, Seattle, Washington

EVENING: BANQUET

Crystal Ball Room, 6:30 P. M.

Tendered in honor of President and Mrs. Glatfelter by the delegates and their ladies

ADDRESS: 8:30 P. M.

Remedial Measures for the Control of Stream Pollution,
C. M. Baker, Engineer of the American Pulp and
Paper Association.

When East
meets West
there is
friendly
feeling
as evidenced
here when
Chairman
C. R. P. Cash
gave the
key to the
Northwest
to President
P. H. Glatfelter
and bade
him welcome
to the
first fall
meeting
of the
Pacific Coast
Section of
T.A.P.P.I.



effect a concerted attack on the basic problems of the industry.

Frank S. Baker, who is both publisher of two Tacoma newspapers and president of the Cascade Paper Co., gave an appropriate response.

President P. H. Glatfelter of the national body of TAPPI complimented the initiative of the Pacific Coast men in organizing their own section so that they might conveniently get together.

He recalled the very interesting meetings that had been held in New York last February when the national body was in session, at which time the Pacific Coast section was being talked about. "We all struggled diplomatically to be the one to be sent out here," he said, "but finally agreed that Secretary R. G. MacDonald would be the best man for the purpose and accordingly he came out last June."

In 1906 President Glatfelter visited the Pacific Coast, but he admitted great surprise at the changes that have occurred in the meantime.

His address confined itself largely to outlining the development of TAPPI as an organization and an explanation of the several committees which are now actively carrying out the organization's work.

"Since your Pacific Coast is at present perhaps most greatly interested in pulp," he said, "I presume you are most interested in questions dealing with that phase." He urged increasing attention to be paid to the study of proper evaluation of pulp and said he would like to

see the Pacific Coast Section take up with Secretary MacDonald any questions which might arise on evaluation. He explained the practice of circulating questionnaires to learn the industry's problems, and told of some effective work that had been done thru such means. All questionnaires are anonymous, but they are very effective in exchanging information.

Waste utilization is an important subject. The committee on this phase, working with Engineer C. M. Baker, was doing some very valuable work in this regard to cut down the industry's annual loss of \$6,000,000 in lost fibre, President Glatfelter said.

Among other functions touched on were the publication of standard methods of testing, the Forest Products Laboratory fellowship, the studies on permanence and durability of paper. Here, it was explained, TAPPI was able to act as an impartial judge and to assist in ironing out disputes between manufacturers of wood pulp papers and rag papers.

"Don't overlook the mechanical man," he urged. "Chemical engineers are necessary, but don't forget that you need the sympathetic cooperation of the mechanical men, of the steam and power plant men. My own experience has been that since we included these other groups in our discussions that we have been getting better results because each department is then able to realize the problems of the other. I hope that in expanding your Pacific Coast membership that you will remember these suggestions."

"Training for the Industry," was regarded as an im-

portant subject because "it is easier to handle educated men."

"It is not so easy to make paper today," he said. "Processes are becoming more technical. We have to start training the men at an earlier age and we are moving in this direction thru our cooperation with the educational institutions in developing training courses and thru giving summer employment."

President Glatfelter told how TAPPI had grown from a round table group to a membership of about 1000, and how now the organization of the Pacific Coast Section was reviving the original "round table" idea.

"TAPPI now has 17 functioning committees," he said, and, in pointing out that there was work for everyone, "Remember that the life of TAPPI rests on the committee chairmen. They in turn need the help of all."

THOSE WHO ATTENDED

BRITISH COLUMBIA

OCEAN FALLS—F. W. Hooper, Pacific Mills, Ltd.
PORT ALICE—L. K. Bickell, B. C. Pulp & Paper Co., Ltd.
WOODFIBRE—E. P. Brennan, B. C. Pulp & Paper Co., Ltd.
POWELL RIVER—I. H. Andrews, Powell River Co., Ltd.
VICTORIA—Fred Sievers, Sidney Roofing & Paper Co., Ltd.

WASHINGTON

ANACORTES—W. H. Grant and C. B. Everitt, Puget Sound Pulp & Timber Co.
EVERETT—Frank Killien and J. M. Shedd, Everett Pulp & Paper Co.

HOQUIAM—Wm. E. Breitenbach and W. N. Kelly, Grays Harbor Pulp & Paper Co.

LONGVIEW—R. S. Wertheimer, Longview Fibre Co.

MILLWOOD—Myron Black, Inland Empire Paper Co.

SEATTLE—Kenneth Shibley, California Filters Inc.; S. Geysbeck, Gladding, McBean & Co.; Thomas M. Gibbes, Puget Sound Power & Light Co.; Fairman B. Lee, Asbestos Covering & Supply Co.; Earl G. Thompson, Great Western Electrochemical Co.; H. K. Benson and W. L. Bueschlein, University of Washington; Charles K. Newhall, Chemical Engineer; J. D. Hull, Engineer; A. J. Gilardi and Wm. Bowman.

SHELTON—D. B. Davies, Rainier Pulp & Paper Co.

TACOMA—R. E. Chase, Chase Chemical Engineering Co.; James Nelson, D. H. Van Wert, Charles Cockroft, Donald Meyers, A. S. Hooper, Harold T. Fretz, C. R. P. Cash, Ralph C. Brown, George Forrester, George Lierman, Alex McBeath, George Gladding, and Ned Meyers, of Cascade Paper Co.; Ross G. LaMotte, Bennett's Chemical Laboratory; A. H. Hooker, Jr., Hooker Electrochemical Co.; Elliott H. Woodruff, Shaffer Box Co.; A. R. White, L. L. Zodtner, and C. M. Holt, Tacoma Electrochemical Co.; L. R. Wood, Edward P. Wood, D. E. Cousins, W. W. Griffith, and Joseph Hedin, Union Bag & Paper Power Corp.; Frank S. Baker, Tacoma News-Tribune; F. C. Brewer, M. J. Mickey, and F. S. Buckley, Tacoma Chamber of Commerce; E. J. Darrow.

OREGON

CORVALLIS—F. H. Thurber, John Fulton, George W. Peavy, E. C. Gilbert, and George T. Parker, Oregon State College.

NEWBERG—Sigurd Norman, A. C. Sillman, and George Thorsen, Spaulding Pulp & Paper Co.

PORTLAND—Ray Smythe, Willamette Iron & Steel Works; Walter Hodges, Appleton Felts and Appleton Wires; Walter McGinnis, Smith & Valley Iron Works; Thomas Lovett, Paper Mill Equipment Co.; Arthur B. Green, Engineer.

OREGON CITY—R. J. Schadt, Hawley Pulp & Paper Co.

ST. HELENS—R. Reid, St. Helens Pulp & Paper Co.

CALIFORNIA

LOS ANGELES—George H. Horne, Western Precipitation Co.

SAN FRANCISCO—W. Hirschkind, Great Western Electrochemical Co.; Clark T. Henderson and Fred Shaneman.

EASTERN VISITORS

C. M. Baker, Engineer, American Paper & Pulp Association, Madison, Wis.

P. E. Hodgdon, Munising Paper Co., Munising, Mich.

P. H. Glatfelter, P. H. Glatfelter Co., Spring Grove, Pa.

E. P. Cameron, Forest Products Laboratory, Montreal, Can.

The next speaker, Professor W. F. Seyer of the University of British Columbia, conducted the audience thru the Pulp and Paper Research Institute of Canada thru the medium of illustrated slides.

The next two papers by W. Hirschkind and George H. Horne, were purely technical in nature, their titles accurately indicating their content.

The leading paper of the afternoon session, "The Utilization of Pulp Mill Wastes," by Engineer C. M. Baker of the American Paper & Paper Association, aroused considerable interest particularly since Mr. Baker, by reason of having visited many mills on the Coast in the two weeks preceding the meeting, was able to give local application.

"Beater Control," by Arthur B. Green, was a well selected paper dealing with increasing trends toward the application of exact knowledge to the beating operation. Apparatus to demonstrate was exhibited.

While Professor F. H. Thurber of Oregon State College talked about some "By Products of Pulp Woods" he passed around a sample kit containing cedar, myrtle and other wood oils for everyone to examine and sniff. His paper, while not applicable to present day commercial practice, gave some interesting peeks into the future on the by products question.

I. H. Andrews, plant chemist for the Powell River Co. Ltd., went beyond the immediate production of news print to tell of some studies made in "News Print and Ink Penetration." Here was a type of present day salesmanship which stepped out of the factory to study the troubles of the consumer and to cooperatively solve these problems thru correcting faulty printing practices and in turn find out what paper best filled the needs of the daily newspaper press.

On the March

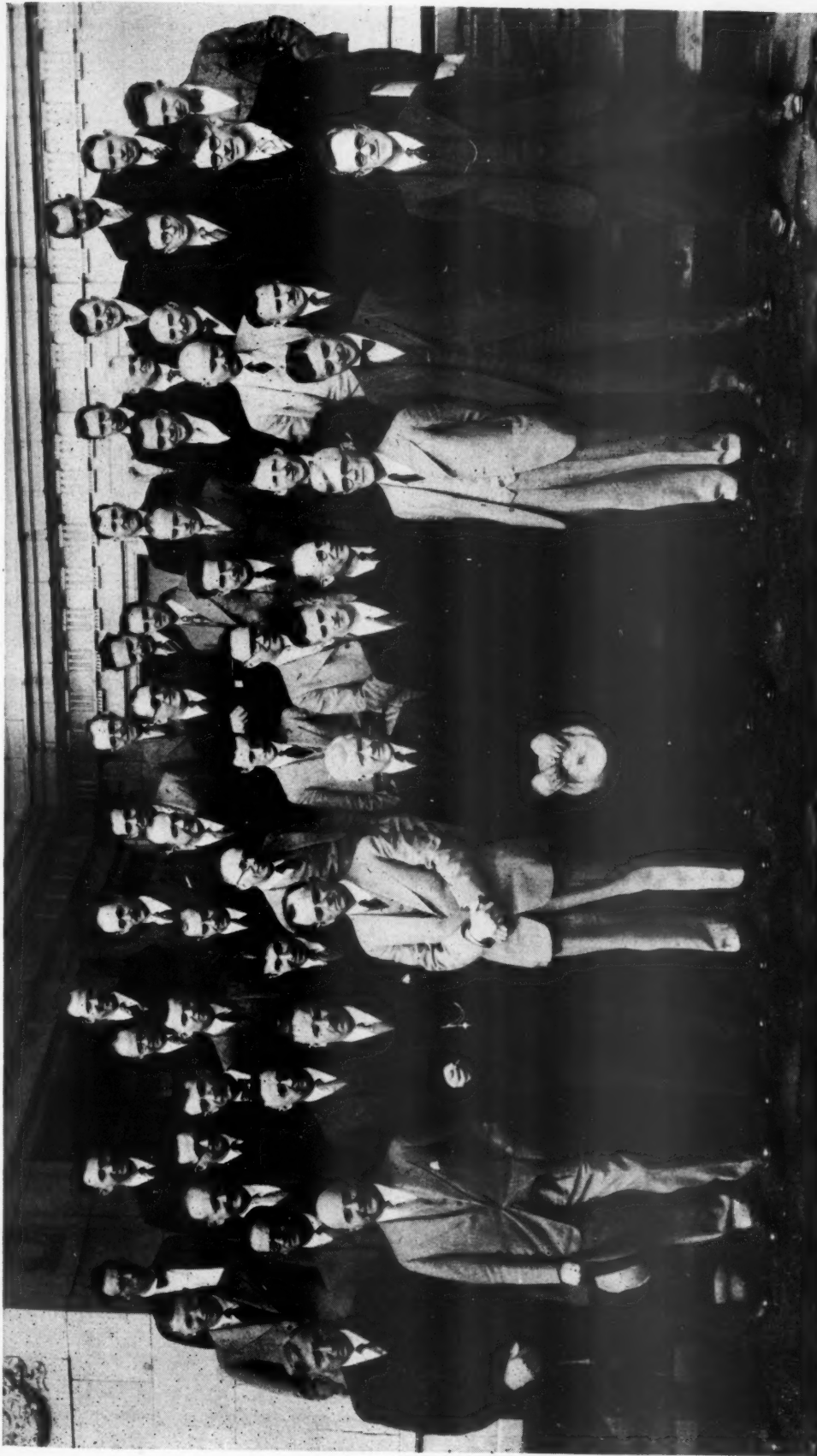
Coming all the way from Montreal, E. P. Cameron, of the Forest Products Laboratory of Canada, told how the institute had developed to tackle industrial problems and how it has progressed thru the completion of a new "home" in recent months, a fruition of hopes.

"Pulp Mill Water Supplies" by Kenneth Shibley of the California Filters Co. was a forceful exposition on a problem that is of prime importance to all mills, yet one which is often not given its just dues. The paper was comprehensive, discussing the problem from first consideration of supply, thru proper treatment, costs, and effect on finished product.

The closing paper by W. L. Buschlein on "The Effect of Varying Concentrations of Sodium Sulphide for Sulphate Plup", which was illustrated on the screen by curves, gave the results of some pioneering studies that had been carried on at the University of Washington.

At the evening banquet there were brief addresses by Chairman Wertheimer, President Glatfelter, F. C. Brewer for the Tacoma Chamber of Commerce, E. P. Cameron of Montreal, George Forrester of the Cascade Paper Co., Dr. H. K. Benson and others. The main address, "Remedial Measures for the Control of Stream Pollution," by C. M. Baker was potent with information on an important subject and was delivered by a man who knew his subject and was sincerely interested in it.

A peppy five-piece orchestra served to enliven the dinner and with the striking up of old familiar tunes the diners burst into song and a good fellowship beamed on every face. And with the start of that spontaneous singing someone remarked, "Well, that settles it. You can just bet this Pacific Coast section is organized and on the march."



SOME OF THOSE WHO ATTENDED THE FIRST FALL MEETING OF THE PACIFIC COAST SECTION OF TAAPI.

Quite a few skipped out on the photographer, but here are those who were not too shy. At the extreme left, lower row, is Dr. H. K. Benson of the University of Washington, re-elected secretary. Next to him with hat in hand is National President P. H. Glatfelter, and third is E. P. Cameron of the Canadian Forest Products Laboratory at Montreal. In the next row above, standing just behind top row, is C. R. P. Cash, retiring chairman.

Mr. Cameron's left shoulder is Robert S. Wertheimer, resident manager of the Longview Fibre Co., newly elected chairman. The smiling, dark-haired man, wearing a dark suit and light tie (who stands two rows directly back of the man in the light suit, third from the right end, front row), is R. Reid, chemist, St. Helens Pulp & Paper Co., newly elected vice-chairman. Second from the left,

Remedial Measures

For the Control of Stream Pollution*

By C. M. BAKER

Engineer, American Pulp & Paper Association

Pollution of streams, lakes and harbors can not be prevented where there is industrial and municipal development, but control and corrective measures can be initiated and placed in operation which will permit a practical and economical utilization of our streams, compatible with industrial and municipal developments and the best interest for the general public.

Pollution may be classified as bacterial, organic, suspended matter, and that which is toxic or poisonous. Bacteria from the domestic sewage of municipalities constitute the greatest danger to the public health.

The principal measure of the pollutional effect of any waste upon a stream consists of a chemical test for the dissolved oxygen present in the water. If this drops below 2 parts per million, fish will die or seek other habitat; $3\frac{1}{2}$ to 4 parts per million is considered satisfactory; although normally a stream may contain 7 or 8 parts per million of dissolved oxygen.

Natural stream purification permits a limited amount of pollution to enter a stream without deleterious effect.

Because of its effect upon the public health, much consideration has been given to the treatment and disposal of domestic sewage. It is only recently, however, that serious consideration has been given to the disposal and treatment of industrial wastes, so that satisfactory methods are not available for many of these.

Co-operation

In fact, this problem really constitutes a series of problems as numerous as the various classes of industry. It is, however, largely one of utilization of the waste within the industry itself, which in some instances, has been accomplished to economic advantage.

Prohibitory legislation or policies cannot solve the problem without injury to industry. Cooperation between all concerned, however, will permit satisfactory industrial and municipal development, and also the retention of streams in such a condition that fish life can be maintained in most cases.

A number of states have enacted laws and developed co-operative programs that are producing satisfactory results to all concerned. Such legislation should include the establishment of an advisory committee or board having jurisdiction over all matters relating to stream pollution. It should designate an executive, preferably a representative of the state department of health. The powers and duties of the committee or commission should include the enforcement of all laws relating to pollution, the conduct of research to discover economical and practical methods for a solution of the various problems, the issuing of rules and regulations, and entering into agreements with other states and federal authorities to control conditions on interstate streams. Provision must be made for hearings.

In a number of states, satisfactory cooperative programs between state officials, industries and sportsmen's organizations have been developed regardless of the type of legislation on the statute. In any event, cooperation is necessary to secure satisfactory results.

*An abstract of an address presented before the Pacific Coast section of TAPPI, Tacoma, Washington, October 5, 1929.

Little Bits of News

from the T.A.P.P.I. Meeting

A warm appreciation was shown for the splendid co-operation given by the Hotel Winthrop management. The hotel men went more than halfway in providing without cost the use of the very attractive Roof Garden for the day session and for the evening banquet the TAPPI people sat in the splendor of the Crystal Ball Room.

* * *

Governor R. H. Hartley of Washington sent as his personal representative to the meeting, Charles S. Maybury, director of licenses and Commissioner of Fish and Game. Mr. Maybury was a feature speaker at the banquet and discussed some of the problems that are being worked out in the state, referring in some detail to a problem that has been studied at Shelton, Wash., where some question has existed on the effect of sulphite discharges from the Rainier Pulp & Paper Co. on nearby oyster beds.

* * *

There was already some talk of two-day sessions at the Tacoma meeting. Many felt that pure entertainment features should be worked into the program to provide diversion and to give the attendants a better chance to get acquainted.

* * *

There were quite a few ladies at the banquet. The precedent has been established for bringing along the "better halves." Many expressed their intention to "bring the Mrs." along next time and it is quite probable that some entertainment program will be arranged for their especial benefit hereafter.

* * *

There were a lot of former Wisconsin men at the meeting. They made themselves evident at the banquet by calling on the orchestra to play the University of Wisconsin's war song, "On Wisconsin," and they put a lot of zip into the singing of it too.

* * *

The new chairman, R. S. Wertheimer, isn't given to long speeches. The sum and substance of his brief remarks was that there was going to be a lot of work for everybody.

* * *

"What you call sawmill waste out here looks to me like mighty fine pulpwood when we compare it with the stuff we are using back East," said President Glatfelter.

* * *

F. W. Hooper of Pacific Mills Ltd., took the honor for the mill man traveling the farthest to attend. He came all the way from Ocean Falls, B. C.

* * *

The stirring tribute delivered at the banquet by George Forrester of the Cascade Paper Co., in behalf of the efforts of Dr. H. K. Benson, was one of the high lights of the meeting. He said in substance, "We are a body of technical men and ought to do all we can to advance the industry. We need to experiment. To do that is costly. There are new fibres to be studied. We need suitable equipment. We have an excellent start in that direction in the laboratories at the University of Washington. But research needs moral support. It needs constructive criticism and kindly advice. We have such an able and kindly advisor in Dr. Benson. I am sure that we all appreciate his untiring efforts and hope that continued support will be forthcoming."

Water Supplies for Pulp and Paper Mills*

By KENNETH SHIBLEY, Manager
California Filter Company, Inc.

WATER," said an old hand in the pulp mill business, "may be characterized as the belt which conveys the product through the mill." This remark may be taken almost as literally true for from the time the wood or other material from which the pulp is made starts on its way to being converted into the finished product, it is floated in water.

The mill water supply, therefore, becomes a matter of prime importance. It should be abundant, soft, free from suspended matter and low in color and iron or other dissolved salts that might in any way interfere with the manufacturing processes involved.

Hard water, seldom found here, is objectionable on two general grounds. First, it should not be used in the boilers and second, it is unsuitable for use in the actual manufacture of pulp and paper. If hard water is used in the beaters, an excessive amount of alum must be added to overcome the hardness because no size will be precipitated by the alum until all hard-

ness is removed from the water. Softening reactions brought about in the boiler by using certain compounds under the high temperatures encountered may be dangerous and costly. Boiler feed water treatments should be placed in the hands of an expert and not left to chance. Most of our surface water supplies here need little or no treatment and it is the speaker's opinion that many boiler plants using certain types of treatment would be better off without it.

Fortunately, for the pulp and paper maker of the Pacific Northwest, nearly all the water supplies used are relatively soft, free from iron and low in sewage pollution. With perhaps one or two exceptions, all mills derive their supplies from either rivers or lakes. Both lake and river water may carry some dissolved color, considerable vegetable matter, and at times a heavy load of mud or glacial silt. Generally speaking, supplies are available in sufficient quantities from normal storage or stream flow but in one or two cases, at least along the short rivers of the coastal plain, adequate storage is provided against the period of light rainfall during July, August and September.

The quantity of water required will vary greatly with the kind of pulp or paper being made. Likewise with the extent to which process or white water may be returned to the circuit. Undoubtedly the use of white water for showers and other purposes can be considerably extended over what is now the practice in many mills. Adequate white water tankage at strategic points in the circuit are most valuable and cut down appreciably the amount of fresh make-up water that is required.

In cases where water supplies are limited, the refiltration of process water is being given consideration in the design of new filter plants. Such water, if properly coagulated, settled and filtered, is often as good as the original supply.

Approximately the quantities of water required per ton of wood pulp produced are:

For Ground Wood	35,000 to 50,000	gallons
For Unbleached Sulphite ..	70,000 to 110,000	gallons
For Bleached Sulphite	110,000 to 150,000	gallons
For Soda	100,000 to 140,000	gallons
For Kraft	60,000 to 110,000	gallons

The lower figures represent minimum amounts while the upper ones are maximum amounts necessary. Wood preparation, liquor making, fiber preparation, bleaching, machine operation, fresh water showers, steam and power, and miscellaneous uses are included in the above.

The average water requirement for conversions from pulp to paper is about 20,000 to 25,000 gallons per ton.

Generally speaking, the water supply for a mill is underestimated rather than overestimated. The speaker

"YOU NEVER MISS THE WATER 'TIL . . ."

The old adage, "you never miss the water 'til the well runs dry" applies literally and with force in the pulp and paper industry. Water is not "just water". Concealed in the supposedly simple pure liquid are hordes of little "red" imps that find their way to the company's balance sheet. Often, instead of bringing blame to themselves, they saddle the management's indictments upon some innocent factor.

With the spread of absolute technical control of processes in pulp and paper manufacturing mill water supplies are coming under the cold scrutinizing eye. Progressive managements are no longer satisfied with "just water and plenty of it". They want to know, in addition to its look and feel and plentitude, exactly what is in it, for without this exact knowledge the painstaking attention to detail given in other departments becomes only so much lost motion.

Mr. Shibley presents some interesting angles on a much-neglected subject.

ness is removed from the water. Variation in hardness from day to day imparts an uncertainty to the whole sizing operation. Hard water is not desirable for washing any kind of pulp either after manufacture or after bleaching.

Hardness in boiler feed water is the direct cause of scale, leaky flues, and many of the other troubles incident to large scale steam production. It reduces boiler life and efficiency, increases repair expenses, causes frequent shut-downs and sometimes fuel wastage.

If a boiler water supply is hard, it should be treated outside the boiler and not in it. Never make a sewer

*Address delivered at annual meeting of Pacific Coast Section of TAPPI, Tacoma, Washington, October 5, 1929.

has yet to see the mill which has a water supply too large for its needs. This may be due to a too conservative estimate of requirement for normal rated mill capacity or to an increase in output over rated capacity. If a mill rated at 100 tons per day capacity has a water supply of say 10 M. G. and it is found possible to boost mill output to 140 or 145 tons, the water consumption is increased proportionately. In those mills where water filters are necessary to properly condition the water for use, their capacity is frequently barely adequate for the amount of water required for the original rated tonnage output. With increased production, water use almost invariably increases, thereby overloading the filters, and when filters are operated at high rates—in many cases 200 per cent—poor water and damage to the beds usually results.

Filtration is the most common method used in the treatment of water; it will remove suspended matter and color due to iron or organic matter. Practically every mill should filter its water supply. Adequate filtration has a very definite value in dollars and cents. If a water supply is clear and colorless and other things being equal, the pulp produced will be of better color, greater strength, and higher value than if the water were full of mud, color or vegetable matter.

Effect on Pulp

Filtration will save machine wires by keeping out foreign matter that may cause them to break due to stoppage and lumpy formations in the wire. It will prolong the life of felts by keeping out the tiny sharp particles of sand that tend to abrade and break down the wool fibres of the felt causing tears and breaks.

But the greatest value of all is the effect on the pulp itself, particularly bleached sulphite. The very nature of the wood fibres in the pulp is such that they absorb color and suspended matter from the water. They form a perfect filter mat and if the water used in washing contains undesirable elements, these are almost sure to remain in the pulp and cause specks.

Filtered water is uniform in character and pulp made with it is usually of uniform color. No matter what the tint desired, it should be uniform throughout. This is particularly true on papers for coloring or coating.

Strength is vitally affected by muddy water, the mud acting as a filler. A case in point may be mentioned. Lightweight unbleached kraft showed a loss of almost 50 per cent in strength due to muddy water alone. In this case, the color produced by the mud was not objectionable but the loss in strength was serious. A settled, filtered water supply would have prevented this.

Some waters contain molds and bacteria which are one of the causes of slime troubles. Adequate filtration of the water supply will go a long way in correcting this.

Ample Storage

Generally speaking, the filter plant should be constructed as a unit apart from the rest of the mill. To do so, usually results in lower construction costs, and in a design better suited to the needs of the problem at hand.

If filtration is necessary at all, full provision should be made for proper dosage of the raw water, thorough mixing, ample coagulation, adequate settling and properly controlled rates of filtration through carefully designed sand beds of correct depth and composition.

It may be possible that for a considerable portion of

the year, full chemical treatment of the water may not be required, but when bad water does appear, all plant facilities necessary are at hand and instead of having to battle bad water, the mill operation continues with a good, clean supply of first-class quality. Any attempt to "short cut" a filter plant by eliminating or curtailing any of these necessary elements, usually results in trouble. The process of water filtration includes all these elements mentioned. Anything short of this results in a mere mechanical straining of the water, which except in rather rare cases, is unsatisfactory.

Since no two water supplies are alike, it follows that their methods of treatment are not identical. Many supplies are, however, so closely similar that in general the process of treatment may be said to be the same. Nor does it follow that one type of treatment is adequate for similar supplies. Each should be carefully investigated as to its turbidity, color and pH value throughout a full year's cycle if possible. Chemical equipment should be provided to meet the changing conditions; settling basins should be ample for peak demands during bad weather periods; filter beds should be of sufficient area to assure reasonable rates of filtration even under peak demands.

Ample storage of filtered water should be provided between the filters and the mill supply pumps. The practice of storing wash water in an elevated tank adjacent to the filters rather than to pump it directly from the clear well is decidedly advantageous.

Filter operators should be intelligent men, carefully instructed in their duties and cognizant of the importance of the work over which they have charge. These are but a few of the considerations that should govern the design and operation of the well conceived filter plant.

About Costs

The cost of producing clear filtered water is surprisingly small. First cost of filters will range from about \$3,000 to \$8,000 per million gallons capacity, depending on type and conditions of installation. The cost of producing filtered water exclusive of power for pumping will rarely exceed on the average \$2.00 per million gallons. For bleached sulphite pulp where the use is say 125,000 gallons per ton the water purification cost per ton is not over 25 cents, surely a small item of whole total.

It has often seemed that the quality of the mill water supply furnished has been a matter of secondary importance. Perhaps this was not intentionally so but judging from the number of what might be termed "fair-weather" water supplies, it seems to be a fact. As long as things run along fairly well, the question of the condition or quality is not a live one. But let the water supply run low, get muddy, or full of algae or moss, or otherwise be troublesome, then the subject is of immediate interest to everyone concerned. While it is true that the pulp and paper industry is primarily engaged in that business and not in the water business, yet the extent to which a proper water affects the success of a venture impels belief that a more comprehensive consideration of this phase of the problem would be advantageous. These are not intended as words of criticism but to indicate one of the many considerations that face the mill owner and operator, for unlike many of the problems of process manufacture, the water problem if properly evaluated and solved at the beginning is permanently solved.

Utilization

of Pulp and Paper

Mill Wastes*

By C. M. BAKER, Engineer,
American Paper and Pulp Association

THE utilization of saw mill wastes is considered one of the outstanding economic reasons for the development of the pulp and paper industry on the Pacific Coast. Utilization of wastes within the industry itself, however, is necessary if this advantage is to be fully realized. Furthermore, many of these wastes constitute objectionable sources of stream pollution which under certain conditions, may deleteriously affect the fishing industry. The problem of stream pollution, however, is to be discussed in a separate paper and, therefore, will not be considered at this time. Primary consideration is given in this paper, however, to those mill wastes which are factors in stream pollution.

White Water Utilization

A closed white water system is a profitable investment. Its installation and operation is a practical realization in a number of mills. Nevertheless, fibre losses through mill sewers still cost the pulp and paper industry of the United States upwards of \$6,000,000 annually and fibre losses do not constitute the only waste contingent with inefficient white water utilization. Savings are also affected in water, chemicals and power, with a closed system.

White water utilization resulted in a saving of \$600 monthly in one mill purchasing its water supply from a municipality. A board mill reported a daily saving of \$25.00 in fibre and \$75.00 in power or heat conservation. Material savings have also been reported in filling and sizing. Furthermore, these savings have been effected without deleterious effect upon the product. In fact, in many cases a better paper has been produced, due to increased opacity and better cementing of the fibres through retention of the fine and more completely hydrolized cellulose.

Western mills have been considered rather effective in their white water utilization through the use of efficient save-alls. One western mill purchasing its water supply from a municipality at a cost of about \$150 daily, however, is using approximately 60,000 gallons of water per ton of product, while a similar mill located in another section of the country, uses only 20,000 gallons. A reduction of the water supply in this amount would effect a saving in this western mill of about \$100 per day. Another western mill is losing fibre which it is feasible to recover, valued at about \$30 daily. Substantial losses have also been observed in other western mills visited.

Procedure in Closing the White Water System

There are four important steps in the development of a closed white water system as follows:

1. A white water survey is first necessary to determine existing losses and the extent to which expenditures for their recovery are economically feasible. Furthermore, such a survey is essential later that the result of improvements may be evaluated.

2. The reduction of fresh water to a minimum, irrespective of white water utilization, is essential—both to economize water waste and to simplify the white water problem.

3. Recirculation and reuse of white water without savealls is the next logical step. This further reduces the amount of fresh water required, recovers a certain amount of fibre and reduces the expenditure necessary for savealls and other equipment.

4. Saveall equipment should be the next item of consideration with a view first of recovering fibre and filler and returning the saveall effluent to the white water system, and second, of treating any residual white water which it may be necessary to waste.

Local Conditions

In the application of these improvements, careful consideration must be given to local conditions. Methods applicable in one mill may not be practical in another. The recovery of fibre from white water, is a relatively simple process but its utilization without deleterious effect on the product may involve careful adjustments. Formulae used in the original set-up of a sheet may have to be changed to compensate for the chemicals returned as the white water is utilized. This, however, results in saving of chemicals.

Time is not available nor does it seem necessary to discuss the details of a white water survey.

It should be emphasized, however, that care and thoroughness are necessary to secure reliable results. Measurement of flow must be accurately made and representative composition of samples carefully collected and analyzed by recognized standard methods. Analytical procedure has been studied by a special committee of T. A. P. P. I. which reported its findings at the Richmond meeting last week.

Practically every mill is extravagant in its use of fresh waters. "How much" rather than "how little" water can be used appears to be the common slogan. Wash up hose are left running promiscuously. A 25-foot 3/4-inch hose running freely under 25-pound press-

*Address delivered at annual meeting of Pacific Coast Section of TAPPI, Tacoma, Washington, October 5, 1929.

ure will discharge from 35,000 to 70,000 gallons of water daily and a 1-inch hose from 60,000 to 100,000 gallons. Substantial savings can be made by a check up and curtailment of this waste, for water is a commodity of value even though the only cost to the mill is that of pumping. Furthermore, reducing the amount of water in the mill simplifies the white water problem.

White water recirculation or utilization may be accomplished to a considerable extent without savealls. One board mill reported a reduction in water consumption from 28,000 to 30,000 gallons per ton of product by merely recirculating the white water upon the showers without savealls.

The writer was very much surprised recently to visit a news mill operating its machines without any showers. The trays under the wire had been eliminated except for one about three feet wide next to the breast roll. This permitted the water from the upper wire to drop through on to the lower wire. No difficulties were encountered because of fouling of the wire. If this can be accomplished certainly white water can be used upon the showers after passing through savealls.

Closed Systems

The writer is thoroughly convinced that a closed white water system upon a paper machine is a practical and economical development. Whether highly efficient savealls are necessary however, is a question. In many instances it is believed that a low grade saveall will satisfactorily clarify the white water to permit its recirculation.

In the development of a closed white water system slime control by chlorination or some other effective method, will be necessary in most cases. Many mills are now using chlorine for this purpose. Data available indicates that from one to two pounds of chlorine per ton of product is effective. A residual of 1-10 to 1/2 parts per million is usually maintained. The point of application depends largely upon local conditions.

Sulphite Waste Liquor

The utilization of sulphite waste liquor has not generally proven economically practical notwithstanding the fact that it contains about 50 per cent of the dry weight of the wood and that between 700 and 800 patents have been taken out for its utilization. In some cases, however, it has been utilized at a small profit under exceptionally favorable local conditions and in others its recovery at a loss has been necessary to control stream pollution.

Most of the patented processes are based upon the recovery of products for which there is not sufficient market outlet. A chemist friend of mine recently described his experience in this report as follows:

"I conceived the idea of recovering a certain chemical from sulphite waste liquor and secured a supply from one of the mills for tests in my laboratory which resulted in the production of two pounds of the chemical. This I sold to a wholesale chemical house in New York for 10.00. About a year later I again offered the same product for sale to the same house and was informed that they still have on hand the two pounds purchased from me the year before."

By-Products

Alcohol has been successfully manufactured from sulphite liquor but this is of questionable economic value. Furthermore, the residual waste is practically as objectionable as the original from the standpoint of pollution.

Two basic processes are involved in the most promising developments in sulphite waste liquor utilization at the present time, viz:

1. Evaporation, and burning in the industry itself or using as a binder for briquetting coal. Other outlets are also available to a limited extent for the concentrated liquor but evaporation is the first step.

2. Precipitation of the sulphurous compounds and the reuse in the mill, then further precipitation of the lignins and resins and drying and burning them.

Evaporation

Sulphite waste liquor has been, and is being, successfully evaporated in a number of mills both with and without neutralization. Evaporators that have been used successfully for this purpose include the Scott, Kestner, Zarembo, Swenson, Buffalo Foundry and Machine Co., Joubert & Goslin Machine and Foundry Co., and the E. B. Backer & Sons Co.

The residual, or evaporated liquor, is being utilized in some cases at a concentration of about 30 degrees Be. and in other instances it is being evaporated to a dry powder. One of the most promising outlooks for the evaporate is in the briquetting of coal. Practically all of the output for one mill is being used for this purpose in Pennsylvania. Recent developments indicate the practicability of mixing the concentrated liquor with waste wood and thus burning it.

Data available, however, indicates that it is not economical to evaporate and burn sulphite waste liquor where the cost of coal as fuel is less than \$5.50 or \$6.00 per ton. Where fuel value is less than this amount the mill will operate at a loss in the utilization of sulphite waste liquor.

The so-called Howard process has been developed at the Marathon Paper Mills, Rothschild, Wisconsin. This consists first, of precipitation of the sulphurous compounds which are used back into the process, and second precipitation of the lignins and resin which are burned. The writer is advised that while this process is not yet definitely placed on the market, the company is in position to negotiate with any mill that is particularly interested. Experiments have been conducted for over two years and the results are so promising that the Marathon Mills are planning the installation of a full sized plant.

Sulphate Process

The waste that has caused the most trouble in connection with stream pollution from the sulphate process, is the lime sludge. A number of the western mills, however, are successfully and economically recovering and reburning and utilizing this material back into the process. In fact, it has been reported that one mill in the East which had accumulated a large quantity of sludge by lagooning installed a kiln for its reburning and operated for several years upon the accumulated material. The economy of this, however, appears to depend upon the local cost of lime. Where lime is high, as on the western coast, its recovery is feasible, and where it is cheap there is some question of the economical status of its utilization.

In conclusion, the writer wishes to emphasize the necessity of greater economy on the part of the mills in utilization of waste. This is necessary not only for the economical development of the pulp and paper industry itself, but also to prevent stream pollution to the extent that it interferes with the development of other industries and economic resources.

Beater Control*

By ARTHUR B. GREEN
Member, T. A. P. I.—A. S. M. E.
Portland, Oregon

NOTHING has characterized the progress of paper making in the last fifteen years more sharply than the rise in the use of technical methods. This period saw the inception and growth of the Technical Association, outwardly expressing what mill people increasingly felt inwardly, that the best management may be based upon fact. Up to fifteen years ago there had scarcely been an attempt to find by analysis the

GETTING DOWN TO FACTS

Beating has been under the dominion of "rule of thumb" as thoroughly as any department of paper-making. Judging the beating operation by any of the "pet methods" of manually "listening" to the roll's action and feeling the stock with the fingers has developed a lot of clever guessers, but it has contributed not too much to the hard book of facts. Here is an article that does much to take the "mystery" out of beater operation.

facts pertaining to the preparation of paper stock in the beaters, and it was only a few years prior to the day when the Technical Association came into being that a careful search failed to disclose anywhere, in any language, facts that had been derived in an engineering way about that process.

Study of beating has its difficulties. Perhaps a good many of the studies that have been made in recent years have had unnecessary difficulties. Chemistry, physics, mechanics, to name three of the obvious ways of going at it, can be applied to the problem in endless detail without leading to results of any practical benefit, because the beater and the process which it performs mean nothing by themselves.

Beating is of course a means to an end. The end is a composite of certain qualities or characteristics in the final paper which in turn induce people to buy it on the market. Beating can be evaluated only in terms of these marketable qualities, according to its success in producing them, and according to the expenditure as compared with a determined standard.

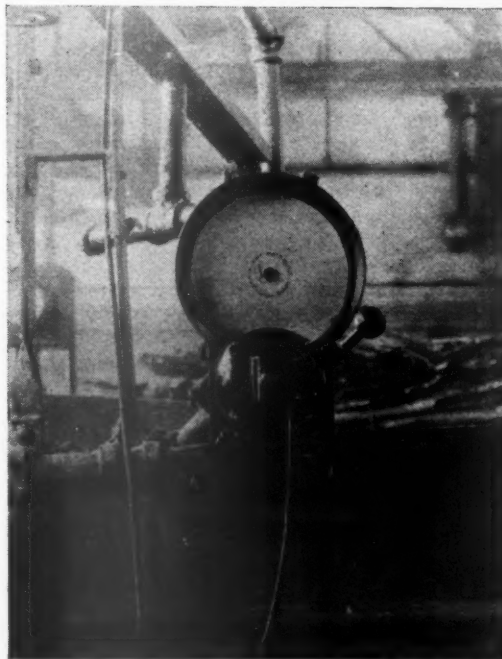
To be practical, therefore, it is well to connect every element in the process of beating with its effect on bursting strength, folding endurance, sizing effect, shrinkage on drying, bulk, freeness, and the like, qualities that directly or indirectly describe the paper being made.

Keeping carefully in mind this connection between beating and its practical purpose, it was possible to discover in the year 1914 for the first time that a comparatively simple law underlies the process. As beating proceeds, whatever the type of beating equipment, certain changes take place in the frictional factors of the mass of stock, when that mass is considered as a fluid.

The degree of these changes and the rapidity with which they develop are an index of the changes taking

place in bursting strength, slowness, folding endurance, shrinkage, sizing effect, bulk, as the stock undergoes treatment. For a more extended report on that point with proof from experiment we may refer to a paper given before the Technical Association at its 1916 Annual Convention and published in "Paper" for February of that year, under the title, "Management of the Beater Room".

It is from these early beginnings, using this simple law, which has been continuously in use in one form or another, that we come to the methods available today whereby we can do with precision in the beater room what we have all along left to guesswork. By precision we mean that the density of the stock can be governed within an error of two-tenths of one per cent, and that the adjustments of the beater roll can be prescribed so



The Green Beater Control Installed

as to result in uniform paper-making qualifications after beating.

The present instrument for control of beating consists of a rotating body with fins or paddles turning under the stock at a fixed speed. The depth of submergence is constant. The form is designed so as to emphasize the factor of internal friction in the mass of pulp rather than skin friction, since of the two the greater changes take place in internal friction. Otherwise the form of the rotating body is not limited in any way. Driving this at constant speed under a fixed sub-

*Address delivered at annual meeting of Pacific Coast Section of TAPPI, Tacoma, Washington, October 5, 1929.

mergence, we read the variations in power used for driving the rotating body. It is not the purpose of the instrument to perform any treatment upon the stock, but merely to measure and record the changes that take place in the stock as a result of treatment by the beater.

Any form of drive would serve, so long as the speed is constant. For convenience we use a fractional horsepower induction motor taking its current from the lighting circuit. The average amount of power used is about that of a 40-watt lamp.

In order to avoid the varying power factor of the motor, we employ a small torsion dynamometer to measure the fluctuations of actual power mechanically, and from this dynamometer we multiply the movement to our recording chart. The result is an extremely sensitive indication of every change in the stock, the gradual changes as well as the momentary changes.

The typical beating curve starts with a broad line and ends with a narrow line. The width of the line represents the degree of unevenness in the furnish, since every thick portion of stock raises the reading and every thin portion drops it. Thus we have a precision record showing how well the beater is mixing.

Accuracy

Each time that size is added, whether in milk or in soap form, the reading drops. The amount of drop is proportional to the amount of size. Each time that alum is added, whether dry or in solution, the reading rises. Thus we have a record showing when these ingredients went in and whether or not the right quantities were used. Not only the adjustments of the beater roll, but the routine of furnishing as well are thus made subject to standard practice by schedule.

To govern the density of furnish a standard practice is laid out whereby the height of stock in the beater is kept constant while fresh fiber is added, and under those conditions the reading is brought up to a scheduled amount. With no preliminary practice it is found that the ordinary beaterman is able to furnish successive beaters within an error of two-tenths of one per cent. That means his beaters are uniform in density within 40 to 60 pounds of paper-making material. In the most up-to-date mills on this Coast laboratory tests show that under the usual practice, that is, without this beater control, the variations in amount of paper making material in the beater amount to 400 to 600 pounds, or in other words, the difference between having control and not having it amounts to the capacity of approximately one beater in every six.

On one occasion, where this principle of control was employed, full width samples were taken of every reel turned up on the paper machine on the same order for a period of three weeks. Those samples were marked in code and submitted to an unbiased observer, one who at the time was responsible for the inspection of all the product from the mill. Studying the samples for several hours carefully, he stated that he would have said that all the samples had come from the same reel.

To put control on the beater, it is necessary merely to make three bolt-holes in the side of the tub, mount the instrument, connect it with lighting current, and it is ready for work.

Frank Wilson Passes

Frank Wilson, one of the old-timers in the wrapping paper department of the Zellerbach Paper Co., San Francisco, died suddenly early in October. Mr. Wilson had been with the Zellerbach firm since 1899.

Oregon Takes Up Pollution Problem

Representatives of pulp and paper mills, fish and game commissioners, state health authorities and others met in the Portland office of Dr. Frederick D. Stricker, State Health Officer for Oregon, on Monday, October 7, to discuss with Engineer C. M. Baker of the American Paper & Pulp Association cooperative measures for handling the stream pollution problem in Oregon.

Last spring a conference in regard to stream pollution was arranged at the state university, Eugene. At this conference the various interests, including industry, state departments, sportsmen's organizations and municipalities were represented. This meeting resulted in the appointment of a smaller committee consisting of the following:

Prof. J. H. Gilbert and Dr. Edwin T. Hodge, University of Oregon, Eugene; Dean H. S. Rogers and Dr. C. L. Langton, Oregon State College, Corvallis; R. B. Hammond, Medford; Fred Williams, Salem; N. H. Wardale, Portland Gas & Coke Co., Portland; J. E. Hanney, Crown Willamette Paper Co., West Linn; Hugh C. Mitchell, State Fish Commission, Portland; Harold Clifford, State Game Commission, Portland; Dr. Frederick D. Stricker, State Health Officer, Portland.

The above committee met and laid out a program which was carried out during the summer, consisting of certain stream surveys by representatives of the state college and a study of the economic phase of the situation by representatives of the university, together with some other activities. A preliminary report upon the activities of this committee will be available for distribution within the near future, and at a later date a more complete report.

At the meeting on October 7, in addition to most of the members of the committee, other interests also attended. Various phases of the stream pollution problem were discussed, emphasis being placed upon the impossibility of controlling pollution by prohibitory legislation and the necessity, therefore, of developing constructive, cooperative programs.

The principles of the Wisconsin laws and the results obtained in other states were outlined in some detail.

The organization of the cooperative committee in Oregon for first, a preliminary study of the problem and second, development of a constructive program, looking towards its solution, is consistent with the procedure that has been so successfully developed in other states. This, according to Mr. Baker, should lead to the development of a definite constructive, cooperative and sustained program, to solve this important problem in the state of Oregon without injury to industry.

Crown Zellerbach Inaugurates Meetings

Crown Zellerbach Corporation has inaugurated its own plan of meeting whereby managers of the corporation's various mills will meet periodically for conference. The first meeting will be held October 22, at Port Angeles, Wash., where will gather representatives from mills at Floriston, California; Lebanon and West Linn, Oregon; Port Angeles, Camas and Port Townsend, Washington; and Ocean Falls, British Columbia. The meeting will consider standardization of manufacturing processes, efficiency of plant operation and the coordination of the various units.

Periodic meetings are a feature of the sales organization at present. The same plan has been inaugurated for the production department in an endeavor to further systematize the company's production and decrease manufacturing costs.

Secretary Hyde Explains Alaska Policy

When Secretary of Agriculture William H. Jardine visited Alaska in the summer of 1928 he pledged a definite program looking toward the establishment of pulp and paper mills in Uncle Sam's northern possession. Tho the secretaryship has since changed, "the policy of this Department has in no way changed since Secretary Jardine's visit" we are informed by the present secretary, Arthur M. Hyde.

PACIFIC PULP & PAPER INDUSTRY asked the Secretary:

What will be the policy of your department in offering further allotments of pulp timber in Southeastern Alaska?

Does your department contemplate placing additional allotments upon the market at an early date, or will it content itself with the development of the allotments already awarded without specifically encouraging the introduction of new mills at this time?

After referring to the Department's publication entitled "Pulp-Timber Resources of Southeastern Alaska" by B. F. Heintzleman as indicative of the Department's general attitude, Secretary Hyde's reply goes as follows:

"While the Forest Service stands ready to put additional units on the market any time a responsible applicant so requests, I may advise you that there is no immediate prospect of such a request being made. It is probable that it will be at least four years before paper will be manufactured in Alaska as the result of the provisional awards made in 1927.

"This Department feels a special responsibility for aiding in the development of Alaska. All of her more valuable coastal timber has been withdrawn in National Forests. Unlike our Pacific States, there is no opportunity in Alaska to create a forest industry except on National Forest land and under government policies. Ninety-nine per cent of the Territory is owned by Uncle Sam. According to the best of our lights, we have carried out a policy of forest conservation in Alaska which up to the present time has looked to many people like locking up her resources. We have been under fire for this policy a good many times. It has all been predicated upon the assurance that when economic conditions permit, Alaska would get her great forest industries and would get them under a type of development that would make them permanent.

"Now the economic opportunity appears to have come. Alaska needs more manufactures and more people. And as long as the plan of development is a sound one according to our conceptions of forestry, I feel it incumbent upon the Department to enable Alaska, indeed to assist her aggressively, in getting this economic development. Furthermore, we have a responsibility, as custodian of public property, for utilizing the immense quantities of timber now going to waste in Alaskan forests."

Coast Firm Buys Eastern Mill

The West End Paper Co.'s \$1,000,000 mill at Carthage, New York, which was recently purchased by Crown Zellerbach Corp., will be operated by the Carthage division of National Paper Products, a wholly owned subsidiary of Crown Zellerbach, in conjunction with National Paper's plant at Carthage.

The additional plant capacity was necessitated by the growing volume of business in the East. To secure greater diversification of products, the mill will be remodeled to produce tissue instead of newsprint as

heretofore. The capacity of the mill after the proposed changes will be about 7,500 tons a year.

The move is interpreted as significant of the trend of the times, reversing the old order of the East supplying the West.

National Paper Products Co. already operates one mill at Carthage.

Logging Congress to Discuss Pulp

Indicating the closer relationship that is being established between the growing pulp industry and the logging and lumbering industry, the Pacific Logging Congress, at its twentieth annual meeting in Seattle on October 23-24-25 and 26 will devote the entire Thursday afternoon (Oct. 24) session to the subject of pulp. Last year was the first time that pulp got on the program, but the growing industry has "simply got to be noticed" as some leading loggers state it.

A number of names, well known in the pulp industry, appear on the pulp part of the 1929 program as the following will indicate:

Thursday Afternoon

UTILIZATION

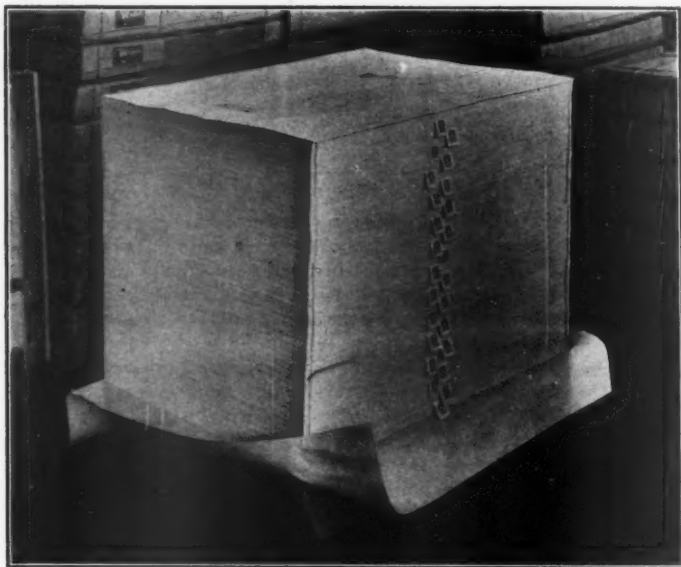
- (1) Relogging and Conservation—
 - (a) Experiences in Relogging.
Andy LeDoux, St. Paul & Tacoma Lbr Co., Tacoma, Wash.
 - (b) What Constitutes a Relogging Show.
D. S. Denman, Crown-Willamette Paper Co., Cathlamet, Wash.
 - (c) The Chipper in the Woods.
K. O. Fosse, International Wood & Sulphite Co., Seattle, Wash.
 - (d) Sawmill as an Adjunct to Logging Camps.
S. A. Stam, Merrill-Ring Logging Co., Pysht, Wash.
- (2) Hemlock—Our Big Problem—
 - (a) The Wood—Its Potentialities.
C. A. Hogue, West Coast Lumbermen's Assn., Seattle, Wash.
 - (b) The Loggers' Problems.
Geo. D. Newbegin, Cascade Timber Co., Tacoma, Wash.
 - (c) The Hemlock Sawmill.
A. E. McIntosh, Clark-Nickerson Lumber Co., Everett, Wash.
- (3) Pulp and Its Relation to Logging—
 - (a) Report on Use of Commercial Logs by Pulp and Paper Mills.
 - (b) How the Logger May Profit From Development of Pulp Industry.
Ossian Anderson, Puget Sound Pulp & Timber Co., Everett, Wash.
 - (c) Future of Pulp on Pacific Coast.
C. P. Winslow, Forest Products Laboratory, Madison, Wis.

New Port Angeles Mill Officials East

Contract for construction of two main buildings of the new pulp mill of the Olympic Forest Products Co. at Port Angeles, Wash., was let last month to Chris Kuppler's Sons, the same contractors who have constructed several other units for the same interests.

Several important announcements regarding the new mill are expected to be made upon return of E. M. Mills, O. C. Schoenwerk and others who are now absent from the Coast in New York and other Eastern cities on business having to do with the Port Angeles mill.

The mill will have an initial capacity of 150 tons of bleached sulphite and will ultimately be enlarged to 500 or more tons. A saw mill will be built in connection.



The skid pack as used by the Everett Pulp & Paper Co. when opened at point of destination is ready to be moved right to the press when automatic feeders are used. Not only is the matter of opening the skid pack a simple process but there are no empty cases to take up space.

Wheat Straw Pulp Interests Palouse Farmers

Farmers in the great Palouse wheat country of South-eastern Washington have become very much interested in the prospect of profitably disposing of their wheat straw, now wasted, to a soda pulp and paper mill projected at Palouse, Wash.

The Palouse Pulp & Paper Co. has been organized at Palouse, a local directorate having been built around H. D. Wagon who claims certain patents for conversion of straw into pulp and paper.

Mr. Wagon, an elderly gentleman, about two years ago burst into print in the Sacramento grape country district in California with the organization of the Sacramento Pulp & Paper Co., of which he was president. At Sacramento the idea was to make paper out of grape vine cuttings. Nothing more was heard of this proposition.

Later Mr. Wagon appeared in Palouse and organized a company. Enthusiasm has been aroused in the farming districts by such means as barbecues, and demonstrations. Mr. Wagon has some demonstration apparatus with which he makes sample sheets.

Mr. Wagon, according to reports, claims to be able to manufacture pulp from straw at a cost of \$23 a ton, to which is added a \$13 freight charge to reach Middle West paper mills.

On September 24 Mr. Wagon addressed the Walla Walla chamber of commerce, following which local papers waxed enthusiastic and foresaw everything up to rayon garments emanating from the straw piles of Palouse.

Spaulding Third Digester Ready

Before the end of October Spaulding Pulp & Paper Co., Newberg, Oregon, will have its third digester in operation. Installation was being completed by the Willamette Iron & Steel Works as September closed and fittings were being applied by the Doran Brass Works, Seattle.

The digester is 15 x 49 feet and has a capacity of 12 tons per cook. Lining was installed by the Stebbins Engineering Co.

With the new digester the mill has a daily capacity of 70 to 75 tons and is in a better position to improve

earnings. Although operations showed a loss at first, the mill is now reported to be earning money for several months past.

The Spaulding mill is operating at capacity and specializing in a high-grade unbleached sulphite made from white fir logs. For a time a bleach plant was considered, but recent reverses in the bleached market and the consequent diminishing of the spread between bleached and unbleached grades has probably indefinitely deferred the bleach possibilities at Newberg.

Seek To Abolish Quinault Indian Reservation

Stretching from Lake Quinault in triangular shape to the sea in the Southwestern Olympics is the Quinault Indian Reservation, one of the finest bodies of pulp timber to be found anywhere. Recently the Indian department rejected all of four major bids made for timber in this area. The department wished to entertain no bids pending the outcome of the "battle of the Olympics".

Last month the Hoquiam Chamber of Commerce with allied forces injected a new element. They will seek to abolish the Indian reservation by appealing to the federal government this fall.

Industrial leaders say:

"It is my honest conviction that the Indian Department has handled the reservation to the best interests of the Indians. Those who advocate a change know least about the lumber business in the state of Washington or the prices which the products are bringing in the world's markets."—Alex Polson, president Polson Logging Co., Hoquiam.

"I do not know the outcome of this move. I doubt, however, that any such move will be made as the result of any local effort on the part of a chamber of commerce."—J. H. Bloedel, president Bloedel Donovan Lumber Mills, Bellingham.

Wood Joins Union Bag Plant

Ed. Wood, for some time sulphite superintendent at Oregon Pulp & Paper Co., after a brief sojourn at Leadbetter's new Port Mellon mill, the Vancouver Kraft Co., Ltd., has severed his connections with the Leadbetter organization and is now with the Union Bag & Paper Power Co. at Tacoma.

The Skid Pack

At right—
Skid pack ready for shipment



ORDINARILY, the average paper mill will keep a moderate saw mill busy in connection making lumber for shipping cases. At least so it often seems to the man in the finishing room. A lot of lumber goes out with the paper mill's finished product to tread no greater path of glory than to a bonfire. And good lumber, much of it, too, riding a freight change that the paper has to pay.

How to get away from the heavy shipping box that uses up the lumber and costs a lot in freight has been a problem, the solving of which has developed the skid pack. The method is not entirely new, but the industry as a whole has not been converted to the method. Experience of the Everett Pulp & Paper Co., however, has been satisfactory for auto truck, rail and water shipments of its book paper.

Paper is heavy stuff and as it is commonly packed in cases weighing a quarter ton the idea of manhandling a package of this size is out of the question at the start. The general practice is to handle these cases on platforms and move said platforms about with hand lift trucks or electric trucks such as Elwell-Parker has especially designed for the purpose.

No doubt a time back some restless individual studied over this case-and-platform combination and saw no reason why all that surplus lumber should be carried around. Why not stack these cases as high as the contents of several cases, eliminate the tops and bottoms and sides of all, put a stout wood cover on top, strap the whole securely, and—well, there you have skid packing.

At the Everett mill the skids are non-returnable. That feature eliminates much needless freight and obviates credits, claims and much bookkeeping for broken skids and the like. The skid runners are four inches in width and full length of the skid, and have a U. S. Standard vertical clearance of 8 or 12 inches.

The company endeavors to pack the skids to full capacity, which is from 2500 to 5000 pounds net of paper. Occasionally, however, it is necessary to reduce the gross weight of the skid pack due to the limited elevator capacity available at the customer's warehouse.

When the pile of paper has been placed on the skid it is wrapped first with a water-proof case lining and then in a heavy outside wrapper which is tape sealed.

Thus is achieved a compact, dust-tight and moisture-proof package.

On top of the package is placed a solid board frame made of $\frac{3}{4}$ " lumber and then the top is securely nailed to the skid with $\frac{3}{4}$ " corner boards to give rigidity to the skid pack. The job is completed with a liberal use of $\frac{3}{4}$ " flat steel bands fastened with clamps. The steel straps are not nailed to the skid or frame.

The details of the packaging are well pictured in the accompanying illustrations.

On paper sizes 36x48 inches and larger there is a horizontal clearance of 29 inches or more between the skid runners. On sizes smaller than 36x48 inches the clearance between the runners is eight inches less than the width of the paper.

This calls for some supplementary explanation. On orders for sheets larger than 32x44 the pack is ordinarily made one tier to the skid. Such an arrangement permits the skid to be used as a feeding platform for automatic feeders on presses. Sizes smaller than 32x44 can be packed one tier to the skid, but the Everett company prefers to pack two tiers to a skid on these smaller sizes, as it has been found that such packing makes for better handling of the skid and, providing a broader base in relation to the height of the package, makes tipping less likely when trucking.

Returning then to the discussion of horizontal clearance it is seen that the clearance between runners depends on whether one or two tiers are placed on the skids. Hence, on sizes less than 36x48 inches the clearance is 8 inches less than the width of the paper if one tier to a skid, and 8 inches less than the length of the paper if two tiers to a skid.

The Everett company has now been using the skid pack for a sufficient length of time to recommend it as commercially practicable. The skid pack gets the paper through to destination in good order and customers like it because it stores in smaller space, handles easily on the pressroom floor, is most convenient to unpack, and last, but most important, there is a tare of only 4% to 5% on which to pay freight.

Low water conditions on the Willamette River made river transportation of paper difficult from Oregon City and West Linn, Oregon, mills in September.

Those Alaska Paper Mill Projects

Very little in the way of real information is forthcoming from executive offices on prospects for development of the two paper mill projects in the Tongass National Forest of Southeastern Alaska. The only ones who really know are reticent in discussing Northern affairs.

There are some interesting bits of news gleaned here and there, however, which may be offered without the strength of official confirmation.

It will be recalled that there are two projects. George T. Cameron of the San Francisco Chronicle, with Harry Chandler of the Los Angeles Times Mirror, holds the pulp timber allotment in the Juneau district with preliminary power permits on Crater and Long Lakes. J. D. and I. Zellerbach hold the timber allotment in the Ketchikan district with preliminary power permits on Fish, Falls, Orchard, Grace, Manzanita, Ella, Punchbowl, Mahoney and Beaver Falls Creeks.

The Federal Power Commission in June authorized the extension of time to June 16, 1930, on both power permits for preliminary work.

Two separate parties have been investigating the timber chances and the power sites, that is, one timber party has canvassed the situation on both the Ketchikan and Juneau allotments, while another party has studied power resources on both power permits.

Preliminary surveys of power in the Juneau area have been completed, but the work is not finished in the Zellerbach holdings. Mr. Cameron is expected soon to file a petition to go ahead with permanent work. Word has been received from Mr. Chandler that "we have not yet determined whether we shall go ahead with the Alaska paper manufacturing enterprise or not, and shall not do so until our final reports are in hand. It does not now seem likely that the last report will be in hand before the first of November."

There have been many intimations that because the surveys on timber and power have been conducted jointly that the two allottees have common interests. There is no confirmation on the point, but officials decline to discuss it.

New discoveries made during the past summer when the federal government was using airplanes to survey the Coastal country have shown new lakes and power sources in the territory hitherto unknown. These discoveries have changed the power outlook and served to confuse the ultimate selection of a site.

Three sites have been viewed with sufficient interest to warrant options being taken. These are Thane, Douglas Island and Snettisham Inlet. Thane may win out, since it is an abandoned gold mine town with excellent buildings that could be immediately used for townsite, and there is plenty of land to build the mill. Also, Thane is but three miles from Juneau, and the city could easily become the "boarding house" for the paper mill, since there is a good road connecting the two places.

Court Decides Freeness Tester Case

In 1927 at the meeting of the Technical Association of the Pulp and Paper Industry in New York, it was proposed that a standard freeness tester should be adopted, so that freeness in terms could be universally understood.

At that time, the Greene Tester was proposed and it was pointed out that it was thought to be an infringement upon the Schopper Riegler patent. It was, therefore, decided to delay the adoption of any standard in-

strument at that time until the patent question was settled. It was at that time that the Foreign Paper Mills, Inc., 72 Duane Street, New York, promised the association that they would try the case in the courts and push the matter to conclusion as fast as possible.

The United States District Court in Boston has just handed down the decision that the Greene Freeness Tester is an infringement on the Riegler patent under which the Schopper Beating Tester is made and has ordered that the Star Brass Manufacturing Co., makers of the Greene Tester, be enjoined from further manufacture and sale of the Greene Tester and account for damages resulting from its infringement. The decision is of considerable importance to the paper trade.

Hawley Pulp to Pay Up Dividends

Hawley Pulp & Paper Co., Oregon City, paid dividends in arrears on its preferred stock and resumed regular payment of dividends on October 1, according to a statement issued by Blyth & Co.

The Hawley company early this year experienced financial difficulties and was forced to defer dividends on its first preferred stock. The arrearage amounted to \$5.25 per share on October 1.

Blyth & Co. purchased the controlling interest in the Hawley company in June as a means of protecting the preferred stockholders. In connection with the resumption of dividends, the statement of Blyth & Co. comments:

"After our acquisition of control of the Hawley Pulp & Paper Co. new policies and operating economies were instituted and a new management selected by us was installed. The success of the new management is evidenced by the promptness with which operations have been placed on a profitable basis.

"Resumption of dividends and payment of back dividends is fully justified by fundamentally sound conditions in the industry. We believe the outlook for the paper business, at least on the Pacific Coast, is much brighter now than at any time in the past three or four years. An upward trend of earnings of well managed properties can be expected with confidence."

Sylvester Cropper Passes

Sylvester Cropper, veteran paper maker of the Pacific Coast, died suddenly aboard the steamer "Ruth Alexander" in San Francisco, September 11, while en route from Seattle to his home in Los Angeles, where he was employed by The Paraffine Companies, Inc. Mr. Cropper had been visiting his son, George Cropper, of the Washington Pulp & Paper Corp., at Port Angeles, Wash. For some years the deceased was assistant superintendent of the Everett Pulp & Paper Co.

DeGuere On Eastern Trip

L. A. DeGuere, pulp and paper mill engineer, builder of many Middle West and Pacific Coast mills, was making an Eastern trip during September. It is reported that he was considering the advisability of closing up his Wisconsin office to confine his entire attention to the Pacific Coast. He is understood to be working on several Pacific Coast projects at present.

Lewthwaite Visits East

A. J. Lewthwaite, vice-president of the Crown Willamette Paper Co., was away from his Portland offices in late September on a trip to other sections of the country.

Grays Harbor Water Troubles

Connection of the Aberdeen and Hoquiam, (Wash.) water systems has been suggested as a way out of two problems on Grays Harbor. Aberdeen has a huge industrial water system with no customers. Hoquiam, dissatisfied with its domestic system operated by the Oregon-Washington Water Service Co., is attempting to take it over via condemnation proceedings. Suggested combination of the two systems would furnish adequate water to either city in case of fire or emergencies and would make industrial water available to both cities.

Hoquiam's water case came to a close last month with Superior Judge J. M. Phillips sitting a price of \$590,000 as the valuation of the system. The company is expected to appeal.

The case, however, appears to be anything but permanently closed. Jury tampering charges may result in the state supreme court declaring the case a mistrial, many people believe, which would put the case right back where it was when it started with Hoquiam "holding the sack" for something like \$100,000, for trial costs.

The defeat of the proposed first-class city charter in Aberdeen—which contained the now famous clause which would have empowered the city council to issue bonds to take over a public utility, without first being so authorized by a vote of the people, appears to have quieted, temporarily at least, the fight in that city to take over the Grays Harbor Railway & Light Co. This action was being watched with interest by pulp people because, Aberdeen, with a huge industrial water system on its hands, the water from which it hoped to sell to pulp mills expected to locate here, was making a move to get lower power rates. The theory had been advanced that high power rates were keeping the water users out.

Port Mellon Experiencing Delays

While building activity at the Port Mellon site of the new Vancouver Kraft Company mill is still curtailed pending definite instructions from President F. W. Leadbetter, most of the construction is already well advanced.

The main idea behind the reconstruction has been to attain economical production, and a sawmill with a daily capacity of 200,000 feet of lumber is expected to go a long way towards effecting this policy. The sawmill will be operated in conjunction with the pulp plant so that all parts of the log may be utilized. The best of the log will be sawed into lumber. The slabs are dumped in a conveyor and transported to the pulp mill where they will be converted into kraft pulp. The sawmill is now nearing completion.

Two boilers of the inclined water-tube type generating a pressure of 400 pounds to the square inch are now being installed. They are the first of their type to be used in British Columbia. While the installation has been costly, engineers believe that it will be justified by economical operation as steam generated at this high pressure can be used more than once, first driving the turbines and then diverted to process work.

Tyrell Covering the Territory

J. P. Tyrell of the Northwest Paper Co. of St. Paul is making a tour of western and Pacific coast cities. He spent September 27 and 28 calling on the trade in Denver.

Wuenschel Handles Grays Harbor Sales

F. J. Wuenschel is now at the Grays Harbor Pulp & Paper Co., Hoquiam, taking care of the Pacific Coast sales work for the Grays Harbor corporation and the Hammermill Paper Co. Mr. Wuenschel is Pacific Coast sales manager for both companies and has the problem of passing on the quality of the paper produced so as to see to it that this is satisfactory to customers. Mr. Wuenschel is also charged with selling to all the Pacific Coast trade that handles the product of this mill as well as the Hammermill Paper Co.'s plant.

Pacific Coast's First Vacuum Dryer

The first vacuum dryer to be installed on the Pacific Coast will be placed in the new bleached sulphite mill of the Olympic Forest Products Co., Port Angeles, Wash., where construction is just starting. A late bulletin informs that the Minton Vacuum Dryer Corporation of Greenwich, Conn., has been given a contract for a 170-ton machine, which is to be fabricated in the shops of Rice, Barton & Fales, paper machine makers of Worcester, Mass.

Tax Question Still Causing Debate

Attorneys for the Grays Harbor Pulp & Paper Co., Hoquiam, Wash., last month filed motions before the state tax commission at Olympia asking dismissal of the company appeal from the valuation fixed by the board and also asking that an appeal of County Assessor R. A. Wiley asking the valuation be increased be dismissed.

Wiley set the value of the plant at \$751,860 and the board of equalization slashed it to \$527,460, cutting \$224,000 from Wiley's figure. The company had asked a valuation of \$200,000.

Both the company and Wiley decided to make appeals, the company desiring an even greater slash. The tax commission notified the assessor's office that the appeal of the company had been asked and withdrawn and that Wiley's appeal was under fire.

Wiley stated that the 100 per cent valuation of the Rainier Pulp & Paper Company's plant at Shelton was \$160,000 in 1928 and was raised to \$400,000 this year. This assessment was again raised by the Mason County board of equalization to \$620,000.

Valuation of 100 per cent of the Washington Pulp & Paper Corp., plant at Port Angeles was \$591,000 this year, including all equipment.

The National Paper Products Co. of Port Townsend was valued this year at \$232,850 on the 100 per cent basis.

Fir-Tex Moves On the Job

Effective October 1 the Fir-Tex Insulating Board Co. closed its Portland offices in the Pacific Building and moved to St. Helens, Oregon, where, according to the announcements sent out, "the future home of their new plant is now under construction." All affairs will hereafter be conducted from the St. Helens office.

The company announced last month that construction contract had been let to a Portland firm and that work was to begin at once. It is planned to manufacture an insulating board from sawmill waste, the first unit to have a daily capacity of 250,000 square feet per 24 hours. A. E. Millington is the principal figure in the project.

Everett Mill Construction Progressing

Construction of the new mill of the Puget Sound Pulp & Timber Co. at Everett is progressing as rapidly as a single shift can carry the work forward. The foundation work, although naturally slow, bears evidence of fulfillment of the company's promise to have the plant completed in September or October of 1930.

Special attention is being given at present to the erection of an office building so that the firm may move at an early date from its present quarters in the Medical and Dental building, Everett, into its own spacious structure. The move is contemplated about December 1. Footings for the building are all in and foundation is being poured.

Pilings for the digester building are being driven and the footings are going in on the site of the stores and repair building. Excavation for the blowpits is now under way, with virtually all the main leveling and grading work done. Filling of one or two large areas is also under way and bulkhead of riprap construction awaits its completion. The wharf the company will use calls for about 1,800 piling, 300 of which had been driven at the first of the month. The Great Northern railway has contracted for the construction of a materials spur to be used during construction, and later for the laying of a veritable yard within the company's property.

The Puget Sound Power & Light Co. has contracted for power for structural purposes and later a large supply for operation of the mill.

Further contacts for equipment placed during the past month include a complete pulp drying machine employing fourdrinier and cylinder dryers. The equipment is manufactured by Karlstads Machine Works of Sweden and will be shipped via the all-water route to Everett. The order was placed through A. H. Lundberg of the G. D. Jennsen Co., Seattle. It will be the first machinery of its kind to be installed on the Pacific Coast.

All three contracting firms engaged in the construction of the new Everett city pipe line which will supply the mill with water, are on the ground, some of them having experienced some nice engineering problems in getting equipment to the jobs. Completion of the line concurrently with the completion of the mill is planned.

New Westminster To Rebuild

The Westminster Paper Co., New Westminster, B. C., plans to rebuild at a cost of \$500,000 its mill which was destroyed by fire last July, the only proviso being that the city of New Westminster furnish \$40,000 of the required capital. The value of the plant and stock at the time of the fire was estimated at \$1,000,000.

The future of the company was discussed at a conference at which Mayor A. Wells Gray presided. A committee of New Westminster businessmen was appointed to assist in raising the necessary subscriptions.

Building New Chemical Plant

Construction on the Portland unit of the Paper Makers Chemical Corporation of Kalamazoo, Mich., is progressing rapidly and it is expected that the 60 by 160, one-and-two-story structure will be ready for roofing late this month. A published report that the company's plans call for the immediate doubling of its capacity, as previously announced, was not confirmed by company representatives. H. A. Stunkard, who has general charge of the company's construction program, has established an office in Portland.

A Forest Field Day In Wisconsin

That Wisconsin is getting real serious about her forest problems is indicated in the Forest Field Day held on lands of the Nekoosa-Edwards Paper Co., near Wisconsin Rapids, on October 3 and 4 under the auspices of the paper company, the U. S. Forest Service and the University of Wisconsin.

The program included addresses by industrial and educational leaders, reports on the progress of forestry by representatives from states, forest schools, wood using industries and conservation agencies.

Field demonstrations were given on the Nekoosa-Edwards Paper Company's project. This location was chosen as being probably the best example of commercial reforestation in the Lake States. While the NEPCO project is only four years old, 1,500 acres have already been planted and 2,000 acres annually is the nursery capacity presently aimed at.

The company has already entered 35,000 acres under the new Wisconsin Forest Crop Law, and plans to have 90,000,000 trees under cultivation eventually.

Paper To South America

Thirty-five tons of paper manufactured by the Oregon Pulp & Paper Co., Salem, Ore., were shipped early this month to Rio de Janeiro and Santos, South America. Consistent efforts to develop South American trade territory as an outlet for paper and other commodities are being made by the Blue Star Steamship line, according to a company representative.

"The principal drawback from getting more business from that territory lies in the fact that consignees have a preference for shipments made on consignment," he pointed out. "For obvious reasons it isn't always good policy to follow this policy."

Files \$4,500,000 Bond Issue

A copy of the real estate and chattel mortgage deed of trust securing the \$4,500,000 bond issue of August 15 of the Puget Sound Pulp & Timber Co. was filed on September 19 at Bellingham, Wash.

The mortgage is given to the Bank of California, National Association, as trustee, and represents security for the collateral trust 6 per cent convertible gold bonds which run ten years.

Pulp Mill Power Requirements Met

More than \$100,000 in new construction and alterations is tied up in the Puget Sound Power & Light Company's acceptance of the power contract for the new Puget Sound Pulp & Timber Co. mill on the Everett waterfront. At first power is to be provided for construction purposes. Later power will be provided for much of the operation of the mill, and to carry that load, installation of a large amount of new equipment is necessary.

Crown Considering Cut-Up Plant At Cathlamet

Crown Willamette Paper Co. is said to be planning the installation of a wood cut-up plant at Cathlamet, Wash., where it now conducts extensive logging operations, to bark and prepare wood for its mill at West Linn and Camas.

The Salten Skogselskap is to make experiments in growing Sitka spruce in Northern Norway in the district south of Narvik, a district not greatly different in climate and latitude than southeastern Alaska, where Sitka spruce is native. The tree has been successfully cultivated in Scotland heretofore.

Something to Figure Out

"Who's Who and Why?" becomes a bit more difficult as time goes on. For example, F. W. Leadbetter controls four paper and pulp mills, the California-Oregon Paper Mills at Los Angeles, the Oregon Pulp & Paper Co. at Salem, the Columbia River Paper Mills at Vancouver, Wash., and the Vancouver Kraft Co., Ltd., at Port Mellon, B. C.

Tied up with the Los Angeles mill is the heavy paper bag plant of the Bates Valve Bag Co. Adjoining the Columbia mills is a paper bag factory which is a subsidiary of the Union Bag & Paper Power Co., this same company operating a sulphate pulp mill at Tacoma, Wash.

Altho there is no confirmation on the point, there seems to be little doubt that Bates is heavily interested with Leadbetter in the Port Mellon mill which is right now winding up a big rebuilding job and will soon be producing sulphate pulp. The output of the Port Mellon plant, 100 tons daily, has been sold in advance to Bates and the Columbia River Paper Mills.

At the same time Crown Zellerbach's subsidiary, National Paper Products Co., at Port Townsend, Wash., has in recent months put into operation a new 200-ton kraft mill, dividing the pulp equally between test liners and paper. Bates is interested here too in taking the product and now there is strong but unconfirmed rumor that Port Townsend will soon enlarge its pulp mill.

St. Regis Paper Co., Eastern mogul, some time ago joined forces with Bates Bag and now the rumor is that St. Regis would be interested in taking at least a part of Port Townsend's additional pulp output.

So here are the threads. Draw them out, diagram fashion, on paper and try to answer "Who's Who and Why?"

Heifner Planning B. C. Mill

Senator C. G. Heifner has been granted a further extension of time by the New Westminster city council in connection with his lease of Poplar Island at the mouth of the Fraser River. He has been granted sixty days as from September 12. In a letter to the New Westminster council the senator said he was negotiating with New York interests to finance a pulp mill on Poplar Island.

Will Operate Rossing Plant

Logging is already under way and preparations are being made for starting a new industry in South Bend, Washington, unique in this district and to the Pacific Coast. The plant is to be one for "rossing" hemlock logs and is owned and operated by A. W. Hammond, timber broker.

Changes At Hawley Mill

William Money, one time previously employed by the Hawley Pulp & Paper Co., Oregon City, is again with the company in charge of No. 2 machine in the tissue mill.

H. C. Reimer has come out from the East to join the Hawley mill as chief beaterman and color expert.

Everett Mill Making Improvements

A new carpenter and machine shop of frame construction is to replace the old one at the Everett Pulp & Paper Co. shortly. The old building is being torn down. No new machinery is involved. Extensive repairs to the company's Snohomish river dock are also being made.

Revived Interest On Cowlitz River

Report that E. W. Backus, whose name is legion in the Upper Great Lakes region in pulp and paper, had pooled certain interests of the Insulite Co., a Backus organization producing insulating board, with similar interest of the Johns-Manville Corp. and the United States Gypsum Co., caused eyes on the Pacific Coast to turn again last month to the Cowlitz river in Southwestern Washington, where Backus interests hold certain waterpower rights.

The report, published in great detail in the New York Herald Tribune, said that the merger would represent a \$250,000,000 amalgamation.

In the New York statement it was said that the expansion was contemplated with the building of new factories in Pacific Coast and other territories.

The State of Washington some time ago gave Mr. Backus a permit for development on the Cowlitz. Since then many thousands have been spent by Backus in preliminary engineering. In the meantime, the Sanderson & Porter interests, which control the Grays Harbor Railway & Light Co., took exception to the permit and made appeal. The case has not yet been tried. Awaiting appeal, however, the Sanderson & Porter interests have tied up most of the lands which would be involved in dam sites and reservoir flowage.

Sanderson & Porter, being in the public utility business, apparently have looked to precedent in the courts which gave the public utilities power of eminent domain in condemning power sites.

A recent court decision (State Ex Rel. Chelan Elec. Co. v. Sup'r. Court, 142 Wash. 270) has changed the old order, practically reversing former decisions, holding that power of eminent domain could be used in condemnation of power sites when manufacturing and not purely public utility interests were to be served by the proposed development. This decision may break an apparent deadlock existing between the Sanderson & Porter group and Backus, giving the latter clear sailing.

There are no announcements of anything definite, but so far it's an interesting picture.

Survey On Nonutilized Wood Is Published

If the 33,000 carloads of wood waste arising annually from the sawmill and woodworking plants in North Carolina were saved it would be the equivalent to saving each year 113,000 acres of standing timber. This is but one of the significant points brought out in the "Survey of Nonutilized Wood in North Carolina," just published by the National Committee on Wood Utilization, U. S. Department of Commerce.

Axel Oxholm, who heads this committee, visited the Coast during the summer. He points out that the North Carolina survey is but an example of what can be done on even a greater scale in the Pacific Coast states.

Olympic Railway Extending South

The Port Angeles Western Railway has awarded a contract for constructing their railroad bridge over the Sol Duc River in the Western Olympics. Construction will start at once.

Port Angeles Western rails have been extended from Tyee to the Sol Duc River, and when the bridge is completed in 90 days, steel will be laid to the Calawah River, where the railroad company expects to construct a second bridge. Permit for the Calawah bridge has been asked of the war department.



Papermaking In Early Chinese Times

President Killam Sails for Japan

Lawrence W. Killam, president of B. C. Pulp & Paper Co., Vancouver, B. C., has gone to Japan, where he will act as one of Canada's delegates to the Pan-Pacific Conference in Kyoto, Japan. Mr. Killam will mix business with the official part of his journey, however, and plans to make a first hand investigation of the Japanese pulp market, in which his company has been extensively engaged for some years. O. Jorgenson, treasurer of B. C. Pulp & Paper Company, returned from a tour of investigation in the Orient only a few months ago.

Rain Welcome In B. C.

Recent rains have been a distinct boon to pulp and paper producers along the British Columbia coast. The long dry summer left the water supply at Powell River so low that for a time officials became mildly alarmed. A similar situation faced Pacific Mills at Ocean Falls, and the B. C. Pulp & Paper Company at Woodfibre, but the heavy rain of early October dispelled these fears.

Art Portrays Development of Paper Making

The history and romance of paper making are being painted into ten beautiful mural panels by Warren Chase Merritt for the walls of the board room of the Crown Zellerbach Corporation in San Francisco. In this room, the executives will direct the activities of their many plants, surrounded by the colorful reminders of the past ages that have contributed to the making of paper and stimulated by the beauty of present production as pictured by this artist.

Two of the historical panels are reproduced here. The first one is a scene in ancient Egypt where papyrus, the first form of paper, was made. Papyrus was not a true paper, as we know it, but was made from split papyrus fibre such as that carried by the girl in the painting. The thin strips of fibre were glued together in a broad sheet upon which a second sheet was placed with the fibres of the second running at right angles to those of the first one. When pounded together the fibres enmeshed into a good writing surface. Papyrus was made into rolls such as that in the hands of the Egyptian nobleman in the painting. The slave in the foreground is shown trimming a piece of papyrus ready for the making of a scroll.

The second panel pictures the presentation of the first true paper to the Chinese Emperor. History states that the Chinese Emperor Hoti, about the year 170 B. C., employed a learned Chinese scholar, named Tsi-Lun, for 30 years to invent an efficient writing material. After experiments with silk cloth and other materials, he succeeded in making a fair grade of paper by beating bamboo and old rags to a pulp and compressing it in sheets in much the same way that paper is made today. The secret was guarded for 600 years before it reached other lands through channels pictured in the other historical panels.

Both panels shown here are beautifully rich in color. Warm reds, clear blues and a harmony of other tones recreate the atmosphere of the ancient Orient. Warren Chase Merritt is a comparatively young artist who has been "discovered" by John Quinn who is in charge of the interior decoration of the new Crown Zellerbach building. Months of research as well as actual painting have already been put into these murals and the finished set of ten paintings will undoubtedly be regarded as an outstanding contribution to the interpretation of industry in art.

Powell River Power Question Unsettled

The contest for Lois River power advanced a step last month when Powell River Co., British Columbia's premier newsprint mill, and Consolidated Mining & Smelting Co. laid their cards on the table before the provincial water control board. But the issue is not yet decided. The two companies will go before the board again on October 18 for a general hearing, the conference of last month being of a purely preliminary nature.

An opportunity was afforded both applicants for the power, however, to sketch briefly the purpose to which they intended to put the waterpower should they succeed in obtaining it.

Consolidated Mining & Smelting Company, which is the largest company of its kind in Canada, proposed to establish a coast smelter and refinery near Stillwater, which is only a few miles from the lake. This would be the first large plant of its kind on tidewater and would for that reason receive considerable popular support owing to the long standing demand for facilities of this kind on the coast. The chief doubts in the way

of this company's application are based on the fact that the Consolidated has tentatively applied for water-power rights elsewhere that would probably suit it as well, and on the uncertainty as to whether the 32,000 available horsepower at Lois River would support the type of smelter contemplated.

When A. E. McMaster, general manager of Powell River Co., appeared before the board he was able to argue on the basis that his company has already established an industry near Lois River, that this industry in order to expand further must obtain that power and that no other site is suitable.

Mr. McMaster and J. H. Lawson, counsel representing the paper company before the board, pointed out that an early decision in the matter was essential so that the company might make use of the low water season next year for constructing a dam and getting other plans under way for expanding the present newsprint mill. If the water power is awarded to Powell River it will be in a position to complete many of the surveying and engineering details during the winter and start actual construction in the spring. It is proposed to install two new machines which would give the company a potential production of between 800 and 1,000 tons daily as compared with 500 tons at present.

The Powell River Co. owns most of the land in the Lois River district, having taken it over from the Brooks, Scanlon company after it had ceased its extensive logging operations at the Stillwater camp and transferred its equipment to Vancouver Island. Ever since 1924, it was pointed out at company headquarters, the Powell River interests have considered Lois River in their plans for future expansion and a considerable sum has been spent on survey work with a view to ascertaining the power possibilities.

While the Powell River Co. was anxious to have the question threshed out and settled at the preliminary hearing, representatives of Consolidated Mining & Smelter Company pleaded for delay so that J. J. Warren, president, and other officials could be heard. Pending a final decision officials of Powell River Co. decline to reveal their plans in further detail.

Camas Work Being Pushed

Buildings are beginning to take shape at Camas, Wash., where the Crown Willamette Paper Co. is pushing a \$4,000,000 improvement program. On the north-east corner of the mill property in a quadrangle lying between the bag factory and the office, and heretofore used largely for pulp stock storage, necessary excavations are being pushed 24 hours a day. Concrete forms are rising and building materials are steadily arriving.

On the other side of the mill buildings a dredge is filling in some low land and deepening the channel. Here the new wood room and other buildings are to be built.

Principal changes being made in the mill constitute an enlargement of the bleach plant to about 100 tons per day, addition of three new machines and rebuilding of others, complete rebuilding of the wood room and addition of a new converting plant.

Not much is being said about changes to be made in operations upon completion of the present program, but it is known that the executives lean heavily toward further manufacture and a wide increase in converted articles is looked for in addition to a general stepping up of grades.

Roy Young, L. M. Smith, Edward Post and A. Charteris on the mill staff and Howard Simons, resident engineer, are key men that this job is keeping busy.



Egyptians Learned to Make Papyrus

B. C. Power Gets Campbell Rights

The long drawn out battle for Campbell River water-power has ended in a victory for B. C. Power Corp., which is understood to have an agreement with Crown Willamette Paper Co. for the sale of power should the latter concern decide to build a paper mill on Vancouver Island.

The matter is not yet closed, however. While the provincial government has actually decided in favor of the B. C. Power Corp., it retains authority to cancel the contract if within 18 months the company presents plans for power development which do not meet with the government's approval. The company has 18 months in which to make test borings and complete a survey of the site and draw up its program for development. It is probable that these plans will be drawn up long before the time limit has been reached, however. If the company's plans are O.K.'d it will be required to proceed at once with construction of a power plant.

The chief competitor of B. C. Power Corp. was Canadian Utilities, Ltd., a subsidiary of International Utilities Corp., which lost out on the grounds that it did not plan actual development itself but proposed to sell its rights to some other interests.

T-R-A-D-E - T-A-L-K

Devoted to the Paper Trade of the Western States

Oregon Mill Sells to Philippines

In September several hundred exporters, importers, shipping men, bankers, and experts of the industrial world in one line or another got together in Seattle to attend the international gathering of the Foreign Trade Council. There was much discussion of markets across the seas, including some pungent advice from no less a shipper than old Captain Dollar himself about the opportunities in the Orient.

That some paper companies are awake to these op-



ALEX B.
GALLOWAY

portunities is evidenced in a statement by A. B. Galloway, sales manager for the Oregon Pulp & Paper Co. that his company had recently placed one of the largest orders of bond paper ever to be consigned to the Philippines. He also stated that excellent connections had been made in the Hawaiian Islands, China, Japan, Straits Settlements and other ports abroad.

Mr. Galloway, who was at one time vice-president and manager of the American Paper Co. in Seattle—now Blake, Moffitt & Towne—was north on a short visit before making a trip East. And they say he had a couple of tickets right down front for the world's series.

New Home For Dixon Company

The Dixon Paper Co. of Denver moved to a new home at 1834 Blake St. on September 1. The new location affords double the floor space of the old location, having five floors and a full basement. All the activities of the company can now be conducted under one roof, it being no longer necessary to rent additional warehouse space. The new location also has trackage to the door and has a covered loading dock. The move, according to Lester Dixon, president of the company, is preparatory to taking on new lines and a general expansion of the business.

Smith Puts Lots of Miles Behind

Edward N. Smith had a chance to get well acquainted with Pacific Coast scenery in late September and early October. With a friend Mr. Smith started out from Los Angeles and north to San Francisco, then up through the California Redwoods to Portland, east along the Columbia to Spokane and back to the Coast and Seattle via the recently opened Tumwater Canyon road across the Cascades through Stevens Pass.

Mr. Smith was enthusiastic over the handiwork of Nature shown along this route, particularly in the Redwoods where trees centuries, yea thousands of years old, were seen.

Commenting on the merger of Tuttle Press of Appleton, Wisc.—which is one of the firms he represents on the Coast—with the Northern Paper Mills of Green Bay, Wisc., Mr. Smith said that he had not yet been informed of any new sales policies that might be formulated, but did not believe the situation on the Coast would be much changed. The new lineup is in effect merely an exchange of stock between the two companies and places both in a stronger position than occupied by either as an independent unit.

The tie-up gives both companies a broader range and both are prominently identified on the new board of directors.

Mr. Smith reports an increased interest in the trade in papers qualifying under the specialty classes. Just plain wrappings are moving rather sluggishly.

Foster Directs Union Bag Sales

L. F. Foster, west coast sales manager of the Union Bag & Paper Co., has opened offices at Room 608, Robert Dollar Building, 311 California St., San Francisco and in the future will direct the sales operations of the firm from this new location. Mr. Foster says the sales offices were established in San Francisco because from there the company can better serve its customers and, also, keep in closer touch with its competitors' activities.

Mr. Foster formerly was manager of the Chicago branch office of Union Bag. R. F. Reid, formerly San Francisco sales representative of Union Bag, has gone to Los Angeles with the Graham Paper Co.

From the San Francisco sales office, the Union company is handling the product of its bag plant at Vancouver, Wash., and is selling grocery bags, coffee bags, special bags and other items of this description. Mr. Foster reports that the paper bag is giving the tin container a hard battle, but a winning battle, for the coffee industry's business. Chain stores, seeking to reduce costs as much as possible, are selling more and more coffee in paper bags, instead of in expensive tin cans.

The Union Bag & Paper Co. sells direct to jobbers. In Los Angeles the line is also handled by the Cupples Corporation.

Ayres Talks On Direct Mail

Direct mail advertising can and should tie in closely with trade paper and magazine advertising, one supplementing the other, Rolin C. Ayres, advertising manager of the Zellerbach Paper Co., San Francisco, declared in a talk he made at the Direct Mail Advertising Convention and Exposition of Printing at Cleveland, Ohio, October 9-11.

Mr. Ayres went east October 5 to address the convention on "How West Coast Advertisers Make Direct Mail Pay." He told of the direct mail work done on the coast by Caterpillar Tractor, the Sunkist orange people of Southern California, the Iron Fireman Co. of Portland and others.

Harold Zellerbach Attends National Meet

Harold Zellerbach, president of the Zellerbach Paper Co., San Francisco, left for Chicago early in October to attend a conference of the National Paper Trade Association. From Chicago he went on to New York.

Paper Men Help in Boosting Colorado State Fair

The Denver Chamber of Commerce and the various luncheon clubs generously got behind "Denver Day" at the Colorado State Fair at Pueblo on September 17, sending more than 1000 Denver business men to the Steel City for the day. Denver paper houses were represented by Bob Marlowe, manager of the Graham Paper Co., and Harry J. Custance, general manager of the Carter, Rice and Carpenter Paper Co.

Will Manage Fresno Division

B. M. Hoblick, long identified with Pacific Coast paper business, is the newly appointed Manager of the Fresno, Calif., Division of Blake, Moffitt & Towne.

Albion Laid Appears in Denver

Carter, Rice and Carpenter have taken the distribution of Albion Laid, a new production of the American Writing Paper Products Company, in the Rocky Mountain territory. Albion Laid is in four colors and white of very high grade writing paper. Carter, Rice and Carpenter have received first shipments from the new Grays Harbor Pulp & Paper Co. mill at Hoquiam, Washington, of Management Bond.

Business Is Good

Business came in so good at the new Oakland branch of the Pacific Coast Paper Co., following its opening March 1 that by July 15 the office and store-room were found too small and the firm was forced to move to 423 Webster St. The old address was 411 Webster.

F. L. Bowie is manager of the Oakland branch and has four salesmen on his staff. They handle both coarse and fine papers, and specialties. Mr. Bowie reports business has doubled since the branch was established.

Paper Trade Getting "Business Averages"

Charles Kahn, secretary of the Pacific States Paper Trade Association, reports that members are cooperating enthusiastically in submitting their "business average" percentages to make up a monthly Coast report on the general condition of the paper business. Many paper houses, not members of the association, also are working with Mr. Kahn on this project.

Best Regards, "Louie"

The quarter century meeting of Colton Union No. 25—meaning the twenty-fifth anniversary of the wedding of Mr. and Mrs. Edgar Louis Colton—was held in September and October and included sessions at the Ambassador Hotel, Los Angeles and the Hotel Mark Hopkins, San Francisco.

On the far chance that some reader might not know who Edgar Louis Colton is, let it be said here and now that he is the very well known director of purchases of the Zellerbach Paper Co., San Francisco, and is an intimate of paper people the country over. Generally he is just "Louie."

To mark the silver anniversary, which occurred Sep-



LOUIS



MRS. LOUIS

As they looked 25 years ago

tember 25, Mr. and Mrs. Colton spent a week in the south and on their return they were feted October 3 at a big family gathering at the Hotel Mark Hopkins. One of the guests was Isadore Zellerbach, president of the Crown Zellerbach Corporation, who also was present at the Colton's wedding.

The motto of the Colton Union, according to Louis is: "In Union there is strength, also Arthur, Joseph, Marion and Edgar," the four children. And these four will sign testimonials that they never had better parents in their lives.

Arthur Colton is with the Western Paper Converting Co., Joseph is with the Rhine Optical Co., Miss Marior is at home and Edgar is the "baby" of the family.

It might be said that the Colton Union has but one officer—Mrs. Edna M. Colton, president, boss, manager.

IF I WERE A PAPER SALESMAN—

I would do my utmost tactfully to encourage my customers in realizing the mutual advantage of grouping small orders instead of passing them on in dribbles. I would do all I could to eliminate superfluous service such as special delivery unless the occasion really demanded. I would explain to my customers, "Special service is expensive, and in the long run YOU have to pay for it. When you really have to have some stuff pronto, give us the S.O.S. and we'll get it here as fast as gasoline and traffic cops will permit, but please don't wreck our faith in you by crying 'Wolf' when there is no wolf." These two things, small orders and needless special service, are but two items in the firm's invisible profits. I would consider it a part of my job, equally as important as actually taking orders, to keep an eye on these "invisibles." And if my boss just couldn't see it that way I would, after a time, most certainly change bosses.

Booster Associations Helping Paper Industry

Denver paper men give credit to Denver and Colorado booster movements for at least a part of the increased business which 1929 has rung up over 1928. Unofficial canvasses have shown a greater percentage of "buying at home" since the Printers' Shopping Day held in May and since the Colorado Association launched its campaign to educate the people to patronize state industries. Paper houses, box manufacturers and printers generally report the first nine months of 1929 safely ahead of the corresponding period in 1928.

**Set-up
Folding
Corrugated
Solid Fibre**

BOARDS and BOXES

**A department for interests allied
with the pulp and paper industry**

**Board
Mills and
Paper
Converters**

Guild Organizes Columbia Paper Products Co.

Construction on a second story extension to the building occupied by the Columbia Paper Products Co., Portland, was started last month. It is to be completed early in November. One-half the company's 50 by 200 plant is already improved with a second story and the extension under construction will enlarge the top floor



**GEORGE
GUILD**

to the full ground-floor dimensions. The addition will house the new set-up department which is being expanded to a complete line.

Until recently the Columbia Paper Products Co. was operated as the Columbia Paper Box Co., and the Columbia Tag Co. With the change in name, incorporation papers were filed last month showing a capitalization of \$500,000.

Officers of the company are George G. Guild, president; Donald H. Guild, vice-president, and W. D. Bennett, secretary.

The expansion program will mean an addition of approximately \$2,000 a month to the company's payroll which now averages \$7,000 monthly. An investment of \$200,000 is represented in the existing plant and equipment.

San Francisco's Consolidated

The work of months involved in the consolidation of the activities of seven San Francisco paper box companies into one big unit—the Consolidated Paper Box Co.—is almost completed and the new firm is making rapid strides towards its goal of lower costs and greater operating and selling efficiency.

The seven plants in the merger were the York-Stern Paper Box Co., Independent Paper Box Co., Gilman-Petterson Corporation, Raisin & Zaruba, Thiebaut Brothers, Boxboard Products Co., and the Enterprise Paper Box Co.

Now instead of the seven small plants, there are four larger factories, three of the former independent plants having been closed and their equipment moved to other plants, which were expanded.

The headquarters of the company is known now as the First Street Division, formerly the Raisin & Zaruba plant. The former York-Stern factory is now the Brannan Street Division, the old Boxboard plant is the Boxboard Products Division and the Independent plant is the Oakland division. Boxboard Division is working exclusively on folding boxes; Brannan Street Division on set-up boxes; First Street Division handles all grades of candy boxes and special work, and Oakland Division takes care of all the work from the East-bay district, including Oakland, Berkeley, Alameda and other cities.

The official executive personnel of Consolidated, as announced recently, follows:

Will I. Warren, formerly of Independent Company, president.

E. L. Stern, formerly of York-Stern Company, vice-president and general manager.

C. J. Bastedo, formerly of Boxboard, vice-president and director of sales.

R. J. Gruenberg, formerly of Boxboard, head of the new research and sales development department.

L. E. Raisin, formerly of Raisin & Zaruba, vice-president and sales manager of the set-up division.

Dave Sahlein, formerly of Boxboard, sales manager of the folding box division.

L. A. Thiebaut, formerly of Thiebaut Brothers, secretary.

Julian Hamerslag, formerly of Enterprise Paper Box Co., treasurer.

Charles Woessner, formerly of York-Stern, production manager for all divisions.

Jake Gilman, formerly of Gilman-Petterson, superintendent of the boxboard division.

James Quinn, formerly with York-Stern, superintendent of the First Street division.

Harold R. Stephens, formerly of Raisin & Zaruba, superintendent of Brannan Street division.

G. A. Fogarty, formerly of the Independent Company, superintendent of Oakland division.

Columbia Adds To Staff

R. J. Clark, formerly city salesman for the Columbia Paper Products Co., Portland, is now sales manager. C. E. Arlidge and A. E. Leu have been added to the company's sales force.

Leo Rudnik, who has been identified with the boxboard industry in New York for several years, has joined the organization as superintendent of the set-up box department.

Western Paper Converting Opens New Offices

President C. F. Beyerl of the Western Paper Converting Co., Salem, Oregon, announces the opening of two new offices to take care of expanding trade in converted specialties his company produces.

One branch is established at Dallas, Texas, and will cover several states about the Dallas hub. Mr. Beyerl reports that the meat packing business creates a big de-

mand for such articles as ham and bacon wrappers in this region and that also the Rio Grande valley is a developing fruit region of importance, demanding more paper products each year. Favorable freight rates from Salem, all-rail to Dallas and nearer points, are in effect and via water through the Panama Canal a water rate of roundly \$10 per ton is available to the close-to-sea markets.

The other office is at Denver and from this point the inter-mountain country will be covered.

The Western Paper Converting Co. is at present running "to the hilt" and more room is urgently needed. Consequently the company is beginning construction at an early date on an addition which will provide approximately twice the present floor space. A wide variety of specialties are manufactured at Salem. Right now there is an interest in fancy fruit box liners.

Box Makers Will Meet in Victoria

The sixteenth annual convention of the Pacific Coast Paper Box Manufacturers' Association will be held at Victoria, B. C., next June, according to a decision reached at a meeting of Seattle and Portland box makers, held the evening of October 5 at the Lewis and Clark Hotel, Centralia, Wash. No decision was reached as to the dates for holding the annual gathering.

Tentative arrangements and committee appointments subject to approval by officers of the sectional organization were made. The meeting was presided over by C. E. Daugherty, secretary of the Seattle group, and Myer C. Rubin, secretary of the Portland organization.

A get-together dinner was served at the hotel preceding the meeting, which was attended by about thirty-five members.

Loading-In-Transit Rate Asked

Complaint against all railroads in the United States was filed with the interstate commerce commission last month by the Hawley Pulp & Paper Co., St. Helens Pulp & Paper Co., and Crown Willamette Paper Co., asking a uniform rate of \$6.30 per car in transit to complete loadings at Pacific Coast manufacturing plants.

At present local rates are collected between the loading points.

Specifically the proposed rate is asked on shipments from Camas, Wash., stopped at North Portland or Lebanon, Ore., or Floriston, Cal., shipments from North Portland stopped at Camas, Lebanon or Floriston, and shipments from St. Helens stopped at Oregon City.

Thielsen Sues B. M. & T.

Suit to recover \$65,000 from Blake, Moffitt & Towne was filed in late September in circuit court by F. D. Thielsen of Salem, Oregon. The complaint charges Thielsen lost his interest in the Rodgers Paper Co., Salem, through fraud.

The Salem man alleged that when the Rodgers company was reorganized and stock put out, the Portland wholesale house obtained control, but that it was agreed Thielsen was to be held as manager at a \$5000 a year salary and 10 per cent of the net earnings for 10 years. The Rodgers company was owned by the plaintiff and Arthur Rahn, the complaint avers.

The complaint sets forth that the former owner of the Salem company was discharged as manager, and had to surrender his stock in the new concern.

Chinese Paper Market Encouraging

The Chinese market for paper offers distinct possibilities as an important outlet for Pacific Northwest exports, in the opinion of Powell River Company officials who have been investigating the field. As a matter of fact, this company has built up a small but promising business in newsprint with paper buyers in various Chinese centers.

China is buying most of its paper at present from Japan and the Scandinavian countries, but British Columbia operators regard Scandinavia as its most serious competitor. No attempt is made to undersell the European or Japanese product, but the market appears to be receptive on the quality element alone.

Owing to the tendency in Japan to manufacture its own paper from pulp imported from this country and elsewhere, the possibilities of developing a market there for paper are not regarded as bright as in the case of China, where paper manufacturing is at a comparatively low state.

Paper Men Welcome Proposed Freight Rate Cut

Denver and Colorado paper houses are enthusiastic over the announcement from Washington that Examiner Albert A. Mattson of the Interstate Commerce Commission has recommended a reduction of freight rates on paper from certain eastern points to Denver and other Colorado cities. The proposed reduction which applies to shipments from Hamilton, Middletown and Chillicothe, Ohio, applies to all printing and wrapping papers except newsprint. Reductions if made will be from the present rate of from \$.89½ to \$1.11 a hundred pounds to 81½ cents to 98½ cents a hundred. Shipments to Fort Collins, Colorado Springs, Minnequa, Pueblo and Trinidad are included in the recommendation.

New Everett Broadside

A new broadside published by the Everett Pulp & Paper Co. will interest sales promotion men. It is used in advertising Everett Super Book, and follows the company's policy in broadsides of providing something interesting to read aside from what is said of the quality of the paper. The theme of this broadside is a suggested tie-up between space advertising and direct mail advertising.

John Mulkey to San Francisco

John Mulkey, one time mill manager of Pacific Mills, Ltd., at Ocean Falls, B. C., and also at different times associated with the Camas and West Linn divisions of the Crown Willamette Paper Co. has been transferred from the Portland offices of Crown to headquarters at San Francisco.

Changes In Bag Factory

Frank H. Gitsham has resigned as superintendent of the bag factory unit of the Crown Willamette mill at Camas, Wash. He is succeeded by J. L. Shively, formerly assistant superintendent.

Golf Fans

"Bobby Jones is not a golfer; he's a machine!" says William Howarth, president of the Everett Pulp & Paper Co. after watching the Atlanta wizard of the fairways in the national amateur tournament held in September at Del Monte.

Refining Pulp by

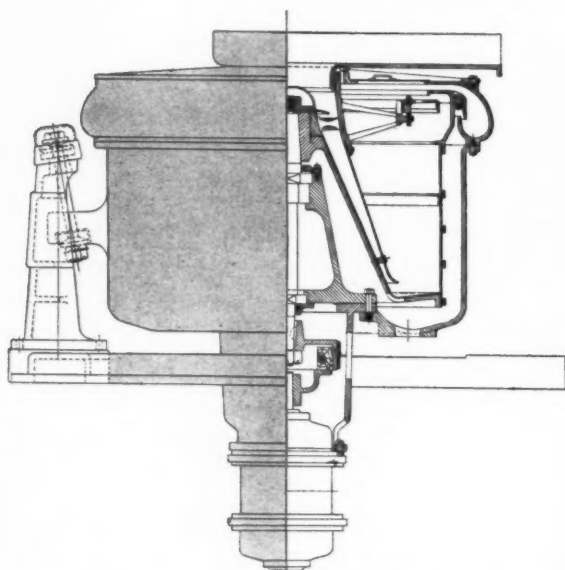
CENTRIFUGAL FORCE

As explained by

THE BIRD MACHINE CO.

THE principle of centrifugal separation of paper stuff from dirt and impurities has arrived. Many engineers hail it as the outstanding contribution to the improvement of the paper-making process of recent years. Over 500 successful installations testify to its efficiency and practicability.

The Bird Machine Co., South Walpole, Mass., builders of the Bird Screen, Bird Pulp Screen and other products identified with the making of cleaner, more uniform paper, announce the Bird Centrifiner. This



Diagrammatic view of the Bird Centrifiner

machine embodies the remarkable effective centrifugal principle of dirt removal and fibre separation covered by the patents of the Centrifugal Engineering and Patents Corp. as originally employed in the Erkensator. The Bird Machine Co. is licensed by the corporation to make use of their patents and these plus the maker's extensive experience and engineering resources have combined to make the Bird Centrifiner a piece of equipment commanding the interest of all responsible for the cleanliness and quality of their product.

By means of an ingenious system of flow through the machine the pure stuff from which all heavy and light impurities have been completely removed flows continuously from the Centrifiner. The principle is exceedingly simple, as the accompanying diagram shows. It is like a simple gravity separator but with its effectiveness multiplied hundreds of times by means of centrifugal force. The heavy dirt is flung to the outer circumference of the whirling stock which is traveling at the rate of 90 miles an hour, the light dirt remains on the inner circumference and the clean, pure stuff, free from even microscopic impurities, is drawn off.

The significance of complete dirt elimination which a Bird Centrifiner installation makes possible must be apparent to all paper makers. Heretofore, the cleanliness of the finished sheet has been relative rather than absolute. Centrifugal separation sets entirely new standards. Now it is possible to make paper that is really clean, without variation.

Other important operating advantages are secured at the same time. The finished sheet is stronger and more perfectly formed as a result of thorough separation of all the fibre bundles in passing through the Centrifiner. It is often possible to get satisfactory results with a lower grade of furnish and to reduce or eliminate hand sorting of rags and the like.

When the Centrifiner is used before bleaching there is a material saving in bleach because the bleach is all used for bleaching paper instead of dirt. The Centrifiner does away with riffles, sand traps and magnetic separators and consequently reduces waste and speeds up the process.

What Will Hawley Do?

W. P. Hawley Sr. and his son Willard Jr., having divorced themselves, for the time at least, from the paper industry when they stepped down recently from the presidency and vice-presidency, respectively, of the Hawley Pulp & Paper Co., Oregon City, when Blyth & Co. took control, are now in the East, their newly established Portland offices remaining vacant.

Said offices were for convenience in "looking after private investments", but those who know the elder Hawley know also his favorite saying that he preferred "to wear out rather than rust out." Those in the know say he has intimated that he will get back into the game he knows so well. It is known definitely that he has been looking thoroly into sites.

The following excerpt from Chapman's Financial Weekly, Portland, has some interest:

"At exact time of Hawley-Blyth negotiations that culminated in Blyth's purchase, according to W. P. Hawley Jr., representatives of International Paper Co. were at Oregon City for the purpose of making a report on the property to International's New York principals. Progress in contemplated sale of Hawley mill to International progressed to point of Senior Hawley's New York luncheon with Archibald R. Graustein, International's president, a name potent in New England waterpower control and, as charged before a U. S. Senate investigational committee, in control of key newspapers through loans.

"Luncheon over, and aboard ship, Senior Hawley cabled his son to proceed to New York City to discuss the deal with Graustein. This Hawley Jr. refused to do, since July 1 bond default was imminent, and the Blyth-bird near at hand was more tangible than International's warblings from afar.

"Now that Blyth owns the Hawley mill, a future sale by them to Crown Zellerbach interests, or to individual factors in C Z so as to avoid outwardly too complete Pacific Coast paper domination by C Z, is more to be expected, more probable in fact, than further dickering with International, in the Hawley opinion."

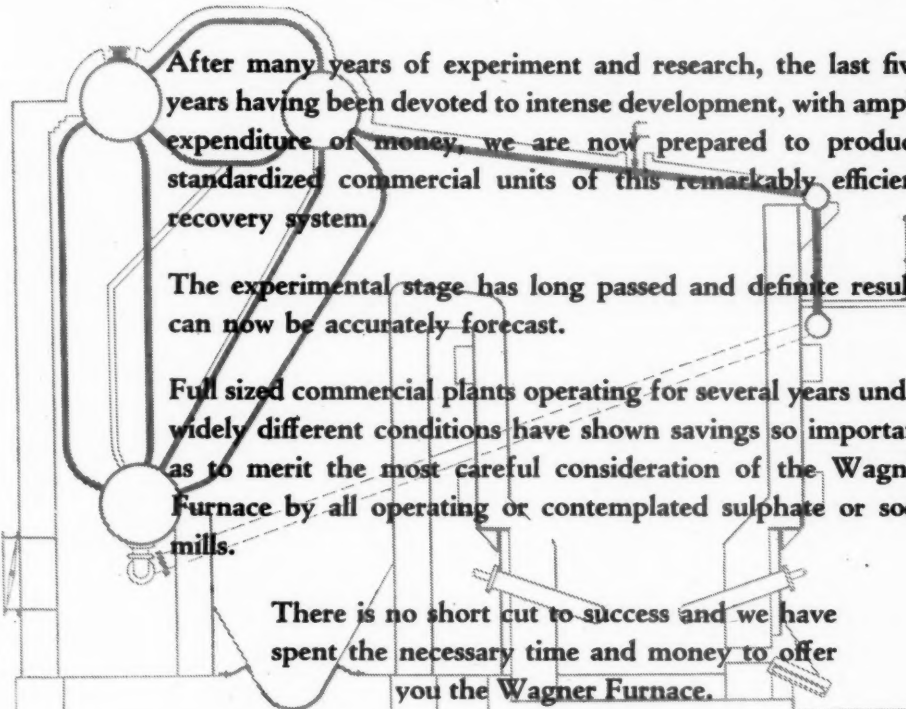
Peninsula R. R. Hearing Will Be October 16

The Interstate Commerce Commission has set October 16 as the date for the hearing at Aberdeen, Wash., on the application of the Northern Pacific and Union Pacific railways to extend their line into the Olympic Peninsula timber district from Grays Harbor.

THE WAGNER FURNACE

ROSS-WAGNER RECOVERY SYSTEMS FOR SULPHATE AND SODA

..A Public Announcement Concerning The
Proven Merits Of The Wagner Furnace..



After many years of experiment and research, the last five years having been devoted to intense development, with ample expenditure of money, we are now prepared to produce standardized commercial units of this remarkably efficient recovery system.

The experimental stage has long passed and definite results can now be accurately forecast.

Full sized commercial plants operating for several years under widely different conditions have shown savings so important as to merit the most careful consideration of the Wagner Furnace by all operating or contemplated sulphate or soda mills.

There is no short cut to success and we have spent the necessary time and money to offer you the Wagner Furnace.

..J. O. Ross Engineering Corporation have sole rights in U. S.,
Canada, and Foreign Countries and have protected all develop-
ments by applications granted or pending. ..

J. O. Ross Engineering Corporation

208 W. Washington St.
CHICAGO

IN CANADA
Ross Engineering of Canada, Ltd.

122 East 42nd Street
NEW YORK

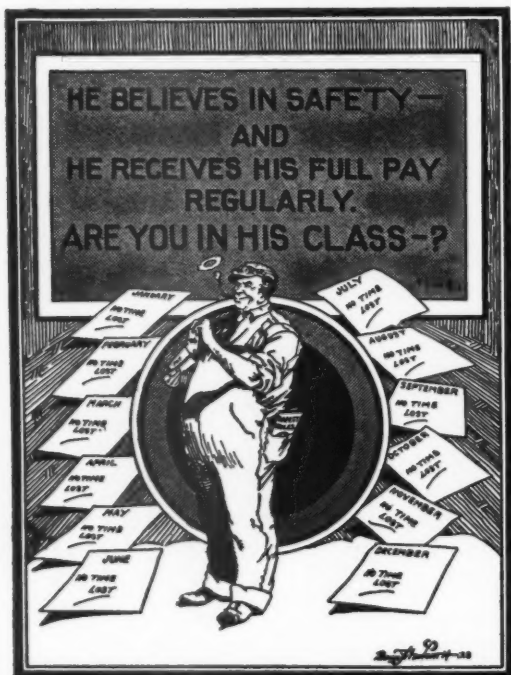
SOLE LICENSEES

519 American Bank Bldg.,
PORTLAND, ORE.

IN EUROPE
Earnest Scott & Co., Limited

S · A · F · E · T · Y FIRST—LAST and ALWAYS

The Best Safety Device Known Is a Careful Man



Some "Intangibles" In Safety Work*

A few years ago, the attitude of an executive who knew considerable and still wanted to learn more, was quite commendable, but at the present age this same attitude is needed and demanded among what was formerly called the laboring class. If you take the time, you will be surprised at the ability of some of the men in your plant, doing ordinary jobs, who are going to night school, reading continually, making studies of your plant and sometimes asking you questions that you're inclined to answer, "It's none of your business." The present day boss of men cannot afford to treat

*Extract from an address by N. H. Bergstrom before the 18th Annual Safety Congress, Chicago, October 3.

this curiosity in such a manner, because if he does, in the long run, he will pay very dearly for such a remark. We encourage our men to read, because when they read they are exercising their mind and you know they will be safer with an active mind than one who is sleeping on the job.

Every convention of safety men has someone to harp on housekeeping and sanitation. Possibly you get tired of it, but if you do, look out for your job. Picture yourself in the other fellow's place. You leave home early, possibly sleepy and arrive at the mill. Do you have a 50-cents-per-hour living to greet you or is it your work? Does not this attitude of mind depend a great deal on surroundings? A clean, well kept mill greets you. A clean up-to-date locker room for your clothes, clean lavatory and a shower waiting when the day is over with plenty of hot and cold soft water. Can a man go at his job, without the feeling it is his job and with an alert mind? We have an installation of this type which cost us \$8,000 and a man to run it for 110 men and we believe it pays excellent dividends. You would be surprised to see how the mill keeps cleaner without any effort, because of this installation.

It seems that we are now entering a time when we should concentrate: First, on teaching the employee to think Safety; Second, on improving his environment during working hours which will aid the first; Third, to eliminate hazards of labor by substituting machinery and finally to not forget to correctly guard all machinery.

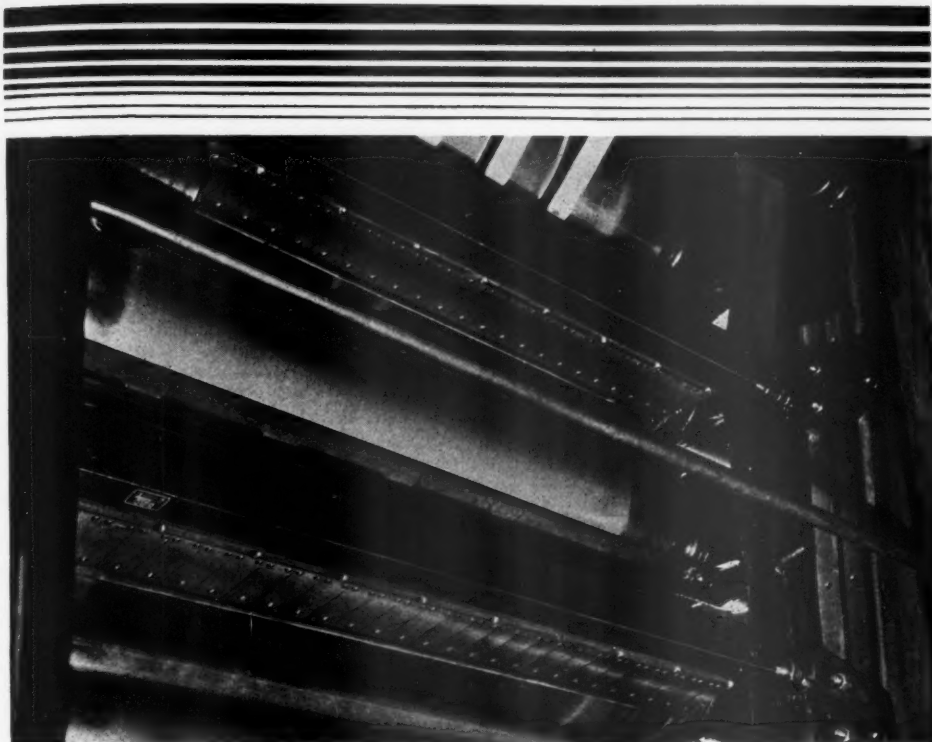
Proper engineering in handling materials is one of the quickest ways to save money. Therefore, one of the best ways to secure efficiency in the organization, is to get together with the engineer and go after your material-handling problem, making as much of it mechanical as possible. It is quite remarkable how closely safety and efficiency work together.

Have any of you safety experts ever sold your superiors a safety device on good engineering only, forgetting the safety part in your arguments, though not in your thoughts?

STATEMENT OF ACCIDENT EXPERIENCE—AUGUST, 1929

COMPANY—	Hours Worked	Total Accidents	Frequency Rate	Days Lost	Severity Rate	Standing
Inland Empire Paper Co.	69,697	0	0	0	0	1
Pacific Straw Paper & Board Co.	16,712	0	0	0	0	2
Pacific Coast Paper Mills	2,764	0	0	0	0	3
Cascade Paper Co.	52,912	1	18.9	7	.132	4
Crown Willamette Paper Co., Camas	292,709	8	27.3	856	2.924	5
Fidalgo Pulp Mfg. Co.	24,272	1	41.2	8	.330	6
Everett Pulp & Paper Co.	87,328	4	45.8	76	.870	7
Grays Harbor Pulp Co.	85,288	4	46.9	33	.387	8
Washington Pulp & Paper Corp.	109,367	6	54.9	35	.320	9
Longview Fibre Co.	86,415	6	69.4	132	1.527	10
Fibreboard Products, Inc., Port Angeles	50,768	4	78.7	80	1.576	11
San Juan Pulp Mfg. Co.	30,904	3	97.1	29	.939	12
Turnwater Paper Mills Co.	20,275	2	98.6	7	.345	13
National Paper Products Co.	69,238	7	101.10	82	1.184	14

Following Mills Not Reporting: Columbia River Paper Co., Rainier Pulp & Paper Co.



VICKERY DOCTORS

prove success on

SUPER-CALENDERS

Now — you may have all the advantages of Vickery Doctoring on both steel and fibre super-calender rolls. No more jams. No more doubtful paper finish. No more shut-downs for frequent sanding of rolls.

With Vickery Doctors, even on fibre rolls, there is no chance of scoring, no need for adjustment. Write today for information.

BIRD MACHINE COMPANY
South Walpole ◀▶ Massachusetts

ANNOU THE BIRD

... and CLEANER PAPER

For the first time in the history of paper making you can now make really clean paper. The Bird Centrifiner, a new, revolutionary yet simple machine, has made obsolete all previous ideas of paper quality. A perfected separator of the centrifugal type, it whirls the dirt out of your stock, whether heavy or light, with an action hundreds of times as powerful as the force of gravity.

The Bird Machine Company has done it again. The Bird Centrifiner is the biggest contribution to the making of clean paper since the Bird Screen.

The Bird Centrifiner* like every other item of Bird Machinery, sets new standards for the continuous production of uniformly good pulp and paper. Write today for complete information.

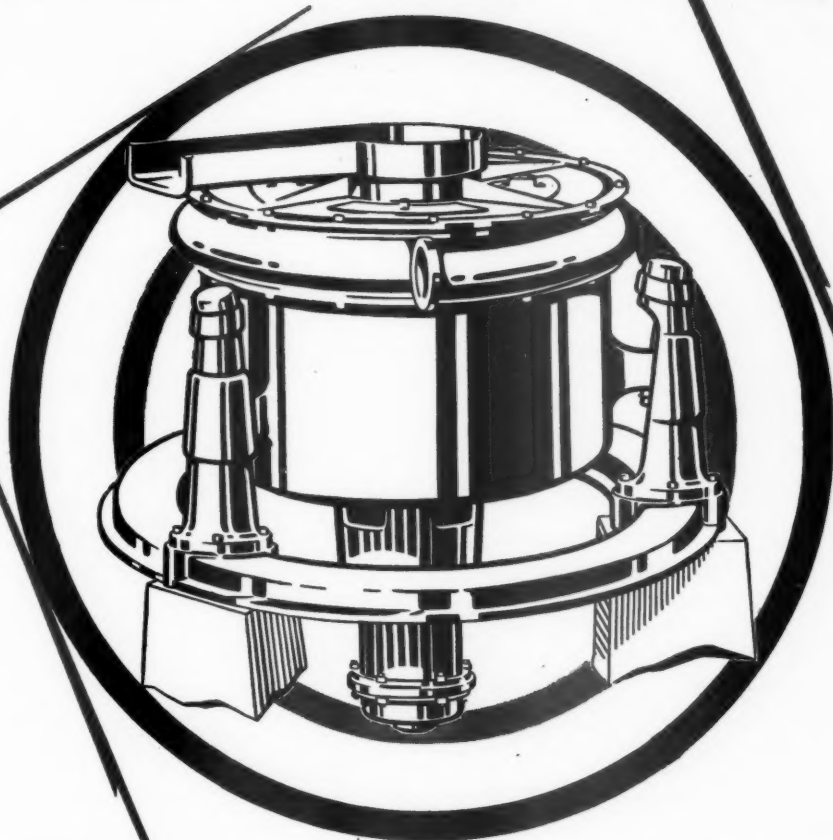
*Manufactured under license from the Centrifugal Engineering and Patents Corporation, holder of the former Erkensator patents.

BIRD MACHINE COMPANY
South Walpole :: Massachusetts

NOW YOU CAN MAKE
... USE BIRD

When writing BIRD MACHINE Co. please mention PACIFIC PULP AND PAPER INDUSTRY.

NCING... CENTRIFINER



PAPER THAT IS REALLY CLEAN
CENTRIFINERS

E·D·I·T·O·R·I·A·L

Price Cutters Should Be Jailed

A HIGH official of the United States government, addressing a recent convention of steel men at Del Monte, is quoted as declaring that the executives of any corporation who cut their prices so that their output is sold at a loss, should be put in jail. Explaining his stand, he pointed out that such action would endanger the welfare and livelihood of employes as well as stockholders, not only of the corporation itself but of all others in the field; that it would disturb economic conditions not merely in the particular industry concerned, but in all lines throughout the country, and would therefore be a public menace.

Such a declaration, coming from such a source, vividly illustrates how far official and popular opinion has gone since the days of ten or twenty years ago, when any movement tending toward not only the advance but the stabilization of prices was universally assailed.

The fact is that the people and the government have largely ceased to take the viewpoint merely of consumers. They have come to regard themselves as a nation of producers; to recognize that steady employment and income are fully as important to the consumer as the prices he pays; that without stability of business the consumer can no longer consume. Whatever tends toward stability, productive activity, and maintenance of profits on a reasonable basis, is coming to be looked upon by wage-earners and politicians, as well as business men, as a factor in the general prosperity of the nation; anything that disturbs the industrial balance or destroys legitimate profits is regarded as a menace.

Maintenance of exorbitant prices by artificial manipulation, or restraint of trade by underhand practices, obviously should not and will not be tolerated. Attacks on competition by ruinous price-cutting are in the same class. Stability of prices on a basis of fair profits, and continuity of efficient and economical production, are foundation-stones of prosperity, and will have the support of public opinion.

That pulp manufacture is complementary to logging and lumbering is beginning to be recognized. Last year pulp got on the Pacific Logging Congress program for the first time. This year it occupies an afternoon session as a matter of course. The two sides are "talking it over". This is progress toward better utilization.

As Pacific Coast industries increase in number their demands for industrial water will increase. The amount of water available is fixed. To make the supply go around it may be necessary to make more efficient use of supplies available. We are nearer to the universal use of "closed" water systems. That means proper filtration. Some experts already advocate that no water should be re-used without filtration.

The U. S. Bureau of Standards tells us that purified wood fibres can be used successfully in high grade papers where permanence is the chief requisite. Slovenly manufacture will not be able to qualify in this market, but to the diligent the field is wide and attractive.

North European countries have been selling rayon pulps to Japan for about \$115 per ton. Japan, further away, gets what is left after Europe is served and is allotted only 5,000 tons this year. The Pacific Coast might look into this.

Some day the principle of electric vibration may supersede present mechanical methods on the four-drier. With 3600 vibrations per minute instead of the present few hundred, what then?

Increasing demands for hogged fuel in the Pacific Northwest are beginning to "pinch" the supply. Last winter's unexpected snow with attendant stoppage of logging operations demonstrated how short is the gap between supply and demand. Not all sawmill waste is as yet going into "hogs" rather than into burners, but there is a fixed limit to the supply.

Several ways out present themselves. Further use of hemlock for fuel, the feasibility of which has been demonstrated. Less dependence on hogged fuel with a turn to oil, or coal. Washington and British Columbia have lots of coal. Or, some enterprising concern will demonstrate the feasibility of using portable "hogs" to work with logging shows and make fuel in the field from logging waste.

More executives are swinging over to the idea that the first cost of equipment is not the item on which to decide, "Shall we buy?" The real measure is, "What will it do?"

When you engage a technical man you are buying production capacity. Good brains are cheap. Poor brains are expensive. GOOD men are not available on office boy salaries.

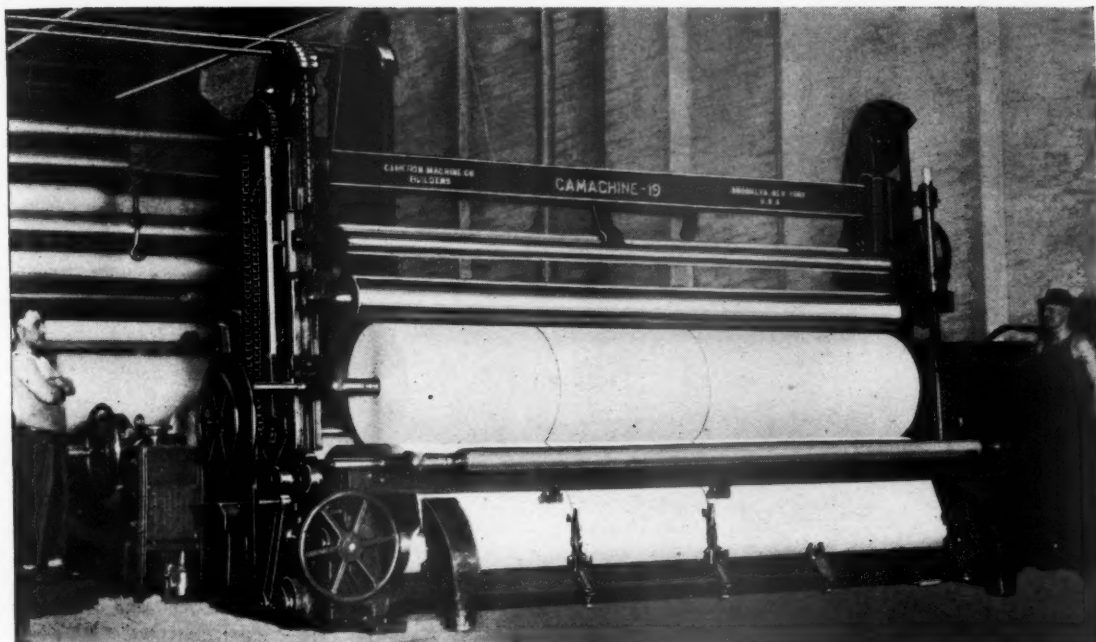
Captain Robert Dollar, 85 and active, knows foreign trade. He told the International Foreign Trade Council meeting in Seattle, "There is plenty of business in the Orient. But you can't send boys after it. Send your BEST MEN."

Present day wood rooms admittedly merely skim the sawmill waste. When the successful log barker appears, making possible the delivery of barked wood from the saw mill and elimination of present laborious slab handling, how quickly will all mills follow the leader. Where's the leader?

Stream pollution problems are already here. They will not decrease in number. Better to recognize and prepare for them than to run afoul of litigation. Room for cooperative work here.

Improving technique demonstrates that mill odors can be controlled. The public, steadily appreciating that control is possible, will soon demand it.

What to do with all the Douglas fir waste? Answer and name your own reward.



CAMACHINE WINDERS ARE FASTER, SIMPLER AND MORE ECONOMICAL IN OPERATION

The special and exclusive features of design incorporated in CAMACHINE ROLL-WINDERS make for easier threading of the web with less false starts; fewer web breaks; better splices; lower maintenance cost—no belts used—less power; less skill required; greater safety to operators; handling any kind of paper or paperboard that can be put on a reel.

CAMACHINE WINDERS produce rolls which are hard all the way from the core up. Firm, hard rolls ship better, cheaper, and arrive at their destination in perfect shape; they also weigh more, give greater car tonnage and require less storage space for stock. CAMACHINE-made rolls are cheaper to produce and easier to sell.

Let us send you some interesting facts regarding CAMACHINE WINDERS.

NO LOSS OF PRODUCTION
CAMACHINE WINDERS
INSTALLED AT WEEK-END

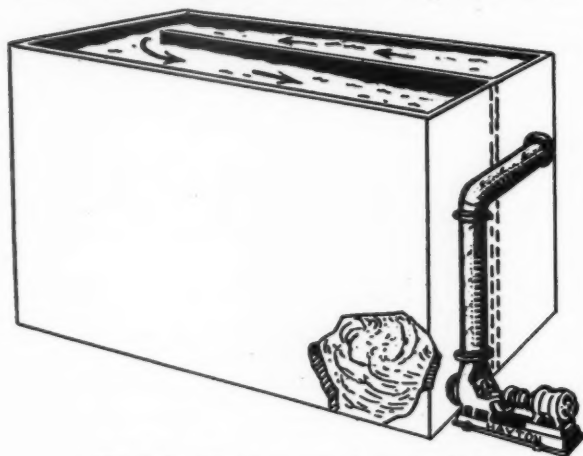
CAMERON MACHINE COMPANY
61 Poplar Street, Brooklyn, New York

When writing CAMERON MACHINE CO., please mention PACIFIC PULP AND PAPER INDUSTRY.

Stock AGITATION by the Pump Method

STOCK in the storage chest of a paper mill would like nothing better than to just lie down and rest. But it has a perpetual tormenter in the paper mill superintendent whose very business it is to see to it that the stock never stops moving. He, the superintendent, has often sat up nights devising new ways and means of keeping that stock on the go. In other words, the problem of stock agitation has been one to cause much study.

In the industry there are many opinions on types and shapes of storage chests. Still more opinions are to be had on methods of agitation. It was, of course, natural that mechanical methods of agitation devel-



Illustrating Hayton system of pump agitation

oped first as they have no doubt been simply successive refinements of the original paddle in a barrel.

More recently, however, attention has been turned to pump circulation of stock and it is with this phase that the present discussion concerns itself.

Paper mill superintendents have always been looking for the ideal conditions. They have wanted an even and certain agitation throughout the chest with all the stock, whether at the top or the bottom, in the center or in the corners, all of a uniform density. They have wanted no stratification. They wanted an even run-off to the machine.

The Hayton Pump & Blower Co. has in recent months put on the market a pump type agitator designed to effect a complete and positive circulation through the chest of stock ranging in densities from 3 per cent to 8 per cent consistency.

The fundamental principle of pump agitation is to draw off the stock at a low level and to return it at a higher level. The pump of course imparts a vigorous motion. Since the natural tendency is to establish a short circuit between discharge and intake something has to be done about steering the stock around the desired route in the chest. This is accomplished with a baffle wall.

Another point in favor of the pump type agitator is its simplicity. There are no belts, shafting or gears and, furthermore, all parts are outside of the chest where they are most readily accessible for inspection or repair. As for costs, the pump type holds its own with other types in first cost and has been found to require less for maintenance.

Still another point is the ability to apply the pump type to all kinds of chests, whether deep or shallow, large or small, round or rectangular, flat bottom or round bottom. Mechanical agitators usually have to be built to meet the particular type of chest used.

Another point in favor of the pump will show up in the cost sheet if you look for it. The ability of this type of agitator to handle 8 per cent stock or better is just another way of making your chest handle larger loads, that is, it is equivalent to enlarging storage capacity without building more chests.

Three types of pump agitator are now available, horizontal, vertical and combination. Of these the horizontal type seems to be most popular.

Pacific Coast Mills Are Busy

The following story is reprinted from the financial section of the New York Times, issue of Sunday, September 15, 1929:

Constructive reforestation, conservative expansion of manufacturing facilities and progressive merchandising methods are the chief factors responsible for the favorable condition of the wood-pulp paper manufacturing industry on the Pacific Coast, according to J. D. Zellerbach, executive vice-president of the Crown Zellerbach Corp. Mr. Zellerbach has arrived in the East to inspect the company's subsidiaries.

"Due to the fact that the expansion of our manufacturing facilities in the West has been kept closely in step with the normal increase in consumption," said Mr. Zellerbach, "the western mills did not suffer as severely as did those in the East when the radical increases there in production passed so far beyond potential consumption limits. Thus, when this latter increase brought about the inevitable curtailment of output in all mills, the curtailment with which the Western mills were faced was negligible. As a matter of fact, our mills have been able to run at approximately 100 per cent of their capacity throughout the entire period as compared with the 80 per cent capacity at which many Eastern mills were forced to operate."

New Power Plant Soon Complete

Some units of Pacific Mills' new power plant are now under cover and it is expected to have them in operation by mid-December. Next year during the dry weather the big newsprint plant at Ocean Falls, B. C., will be able to carry on without the enforced idleness such as experienced for several months this year. The company is spending approximately \$1,500,000 to insure against a recurrence of the situation.

The groundwood mill is being rebuilt, in addition to the provision for increased power. A mechanical pulp screen room is also being built. A new high pressure boiler unit with a turbine to develop 5000 h.p. is being installed.

Occident Mill Receiver Files Account

Creditors of the Occident Pulp & Paper Mills, Edmonds, Wash., last month received notice that Receiver T. M. Royce had filed his final account. It showed a balance of cash on hand of \$797.32. The receiver asked for \$400 and a like amount for his attorney, in addition to \$100 allowed each previously for fees.

With the sale of part of the grinding equipment to the Pacific Straw Paper & Board Co., the Occident mill apparently passes into history.

SHIPPING FILTERS BY THE TRAIN LOAD



Part of Shipment to The Mersey Paper Co.

Shipment of Eight Fine Filter DECKERS and Two Fine Filter SAVE-ALLS to the Mersey Paper Company for their new plant at Liverpool, Nova Scotia. These filters were selected after careful consideration of all competitive machines and the decision based upon the fine showing of the Fine Filters at the Soo Mill of The

Spanish River Pulp and Paper Company, where Fine Deckers have now been in operation for almost two years and are still doing good work with the original covering wire. The Fine patented string discharge picks off thin or thick pads alike, always maintaining a clean filtering surface, constant flow and long life for covering wire.

Write for catalog "THE FILTER WITH THE STRINGS"

Pacific Northwest Representative:

KENNETH B. HALL
355 Everett St.
Portland, Oregon

Woolworth Building
New York, N. Y.

1135 Mission St.
San Francisco, Cal.



General Offices and Plant:

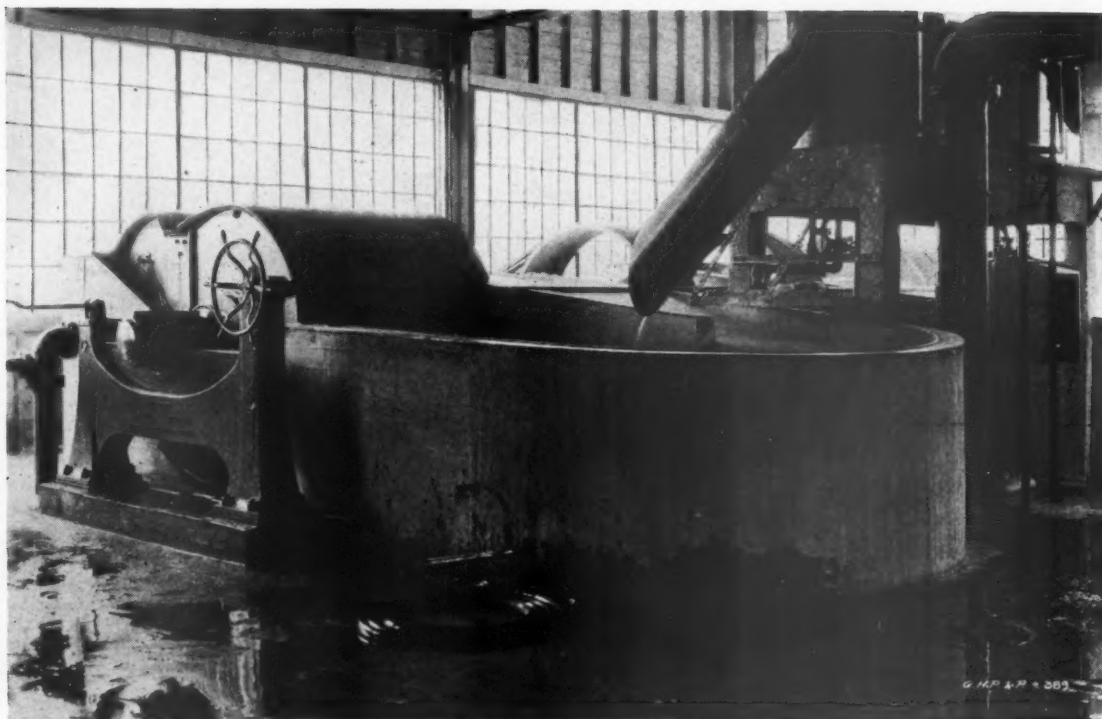
SUMMER AVE. AND ERIE R. R.
NEWARK, N. J.

IN CANADA

Filtration Engineers Limited
Montreal, Que.
Sault Ste. Marie, Ont.

IN EUROPE

Maschinenfabrik Imperial
G.m.b.H.
Meissen, Germany

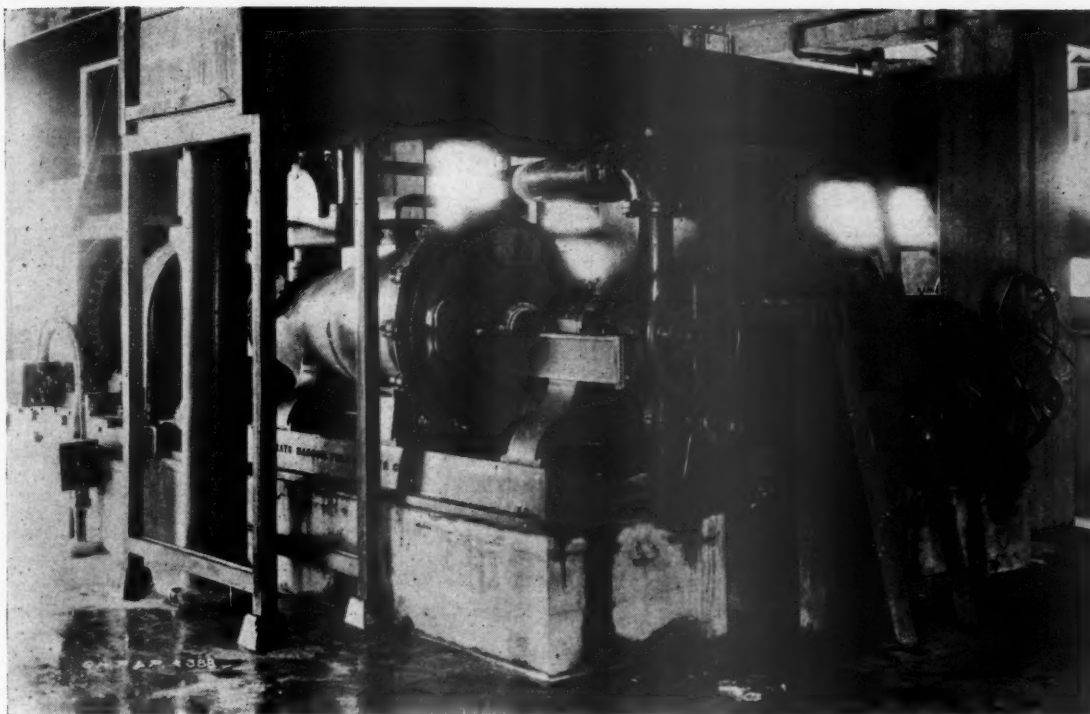


BEATERS *and....*

In the New Mill of the Grays Harbor

The last word in high speed beater design, custom built and constructed for rapid circulation at high density. Tubs are of concrete, tile lined, and all metal parts coming in contact with the stock are non-corrosive. A beater of refinement meriting the hallmark of quality—*"Built by Jones"*.

E. D. JONES
PITTSFIELD,
Established



JORDANS *by* JONES

Pulp & Paper Co., Hoquiam, Wash.

The ultimate in Jordan construction. These Majestics are heavy duty Timken equipped; with the bearings contained in a special Jones designed housings. The shell and plug lined and covered to prevent all possibility of corrosion. Truly a machine worthy of its name.

& SONS CO.

MASSACHUSETTS

1856

*New Types
New Models
New Machines*

EQUIPMENT

Manufacturers of, and dealers in, equipment used by pulp and paper mills, board manufacturers, converting plants, paper merchants, or any other branch of the industry may make their announcements in this department.

*New Dealers
New Branches
Appointments*

Willamette Iron Builds Flat Screens

The Willamette Iron & Steel Works of Portland have just shipped to the Spaulding Pulp & Paper Co., at Newberg, four 12-plate flat screens using general design as made by the Appleton Machine Co. of Appleton, Wisc., with certain changes engineered by the Portland firm in connection with the customer.

These screens were built for an incline which is taken care of by means of spacers on top of the frame. The line shafting remains horizontal. All the parts are very heavily constructed and there is a noticeable lack of vibration under operating conditions. These particular screens have a three-throw cam instead of the usual four-throw cam.

The shafts are connected by a flexible coupling instead of the usual solid coupling. This makes it very easy to replace a shaft, if necessary, without dismantling the whole line of screens. The diaphragm plates may be easily removed from the vats without disturbing the vat. Witham type of vats are used.

All the pattern, foundry, machine and assembly work was done at the plant of the Willamette Iron & Steel Works in Portland. "The building of these screens in Portland," Manager Ray Smythe points out, "will make it convenient for purchasers to keep in close contact with orders and on service. We believe that our entry into this branch of paper mill equipment will be of distinct advantage to mills in this district."

A New Valve With Full Opening

Smith & Valley Iron Works of Portland are announcing this month a new valve that is strictly a Pacific Coast development. It has long passed the experimental stage. Several hundred have already been installed in mills of the Crown Willamette Paper Co.

Ed. G. Reed of the Camas mill of Crown is the originator of the valve.

The valve is of the single action type, designed for quick opening and closing. Claims made for it are that it will not stick, that it is self-cleaning, that it can be drained or washed out while in use. The operating lever can be locked in any desired position.

One of the most notable features is that the opening is the full size of the pipe connections, there being no obstructions to in any way impede the flow of fluids through the valve. The valve is available in sizes from 4 inches to 20 inches.

Western Gear Manufacturers Merge

Merger of interests of the Western Gear Works of Seattle and the Pacific Gear & Tool Works of San Francisco was announced last month. The operation of these plants will continue with each retaining its identity, there being practically no change in personnel. The association will, however, considerably broaden the service of each company as all patents, patterns, drawings, engineering and plant facilities, etc., will now be available to the clients of both companies.

The standard products from each plant will be made

to complement each other, thus offering to users of herringbone speed reducers, worm reducers, cut gears and special gear designs far greater choice than could be offered by the single organization.

The Seattle plant is now completing one of the largest single orders for speed reducers ever placed on the Pacific Coast. The business will continue under the management of R. C. Frankie, president; T. J. Bannan, vice-president; T. J. McCloskey, secretary, and P. L. Bannan, treasurer.

Tolhurst Appoints Walter L. Glass

The Tolhurst Machine Works, Inc., of Troy, N. Y., manufacturers of the Tolhurst Centrifugal for fibre treatment in pulp and paper making, announce that Walter L. Glass has joined the Tolhurst organization as Manager of Paper Mill Sales.

For the past four years Mr. Glass has been manager of the Paper Mill Sales Division of the B. F. Goodrich Rubber Co. of Akron, Ohio. Previous to joining the Goodrich organization, Mr. Glass had several years experience in pulp and paper mill engineering and operation in the Middle West and Canada.

Mr. Glass is a graduate of Syracuse University, class of 1916, and is a member of both the Canadian and American Technical Section of the Pulp and Paper Industry.

New Rod Mill Used on Screenings

According to Homer Malcolm, sulphite superintendent of Hawley Pulp & Paper Co. at Oregon City, Oregon, the Forrester-Rexman Rod Mill installed last winter to refine pulp screenings is working very satisfactorily and has solved a problem which caused much trouble in the past.

This new type rod mill actually consists of four rod mills in one, the rods being placed in four cylinders within the large cylinder. The mill is balanced by this arrangement and according to the Hawley experience requires but a small amount of power to operate.

Kenneth Hall At New Address

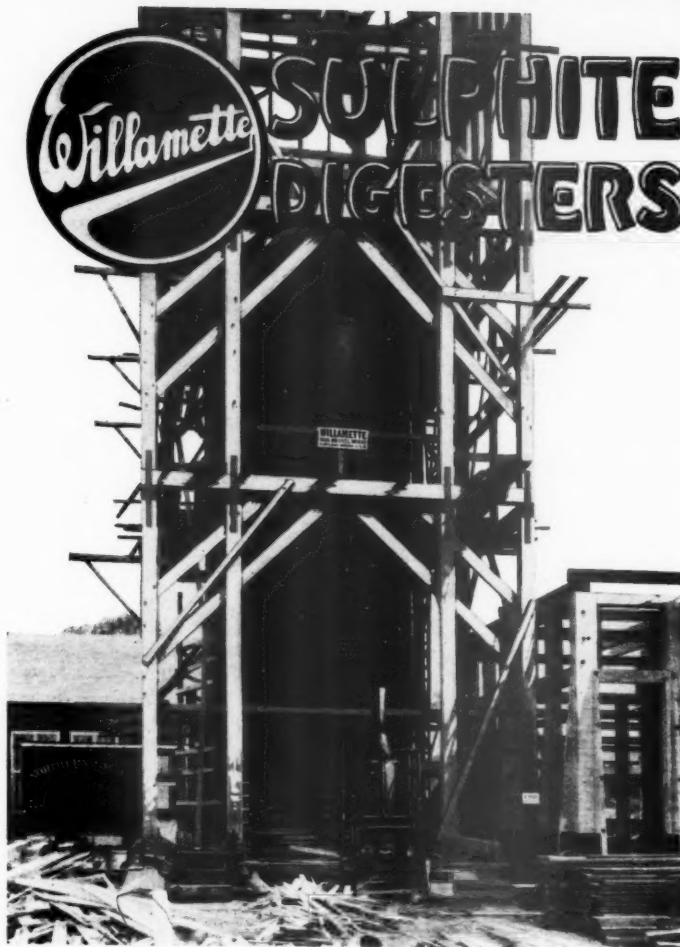
Effective October 1, Kenneth B. Hall, manufacturer's representative of power and industrial equipment, moved his office from 301 Buyers Building, Portland, to 355 Everett St.

Mr. Hall is the Pacific Coast representative of the Noble & Wood Machine Co. and the American Paper Machinery & Engineering Works. He is also Northwest representative of Filtration Engineers, Inc.

Harnischfeger Issues Common Stock

Harnischfeger Corporation, makers of cranes, overhead transportation equipment and similar lines used extensively in Pacific Coast pulp and paper mills, have issued 75,000 shares of no par common at \$30.50 per share. The business began as a partnership in Wisconsin in 1884 and was changed to its present name in 1924. The trade name "P. & H.," which marks their product, is well known.

Crown-Willamette Paper Company Installing Additional Willamette Digester at Camas, Washington



**Prominent users of Willamette Digesters
include:**

Crown-Willamette Paper Co., West Linn, Oregon; Lebanon,
Oregon; Camas, Wash.; Floriston, Calif.
Columbia River Paper Mills, Vancouver, Wash.
Powell River Co., Powell River, B. C.
Hawley Pulp & Paper Co., Oregon City, Oregon.
Pacific Mills, Ltd., Ocean Falls, B. C.
British Columbia Pulp & Paper Co., Ltd., Vancouver, B. C.
(Port Alice and Swanson Bay Plants).
Oregon Pulp & Paper Co., Salem, Oregon.
Spaulding Pulp & Paper Co., Newberg, Oregon.
Inland Empire Paper Co., Millwood, Wash.
Shaffer Box Co., Tacoma, Wash.
Sitka Spruce Pulp & Paper Co., Empire, Oregon.
Rainier Pulp & Paper Company, Shelton, Washington.

**Among those features that
recommend Willamette
Digesters are—**

Truly cylindrical insuring long life from
linings.

Minimum number of plates in cone and dome.
Field erected by experts.

Perfectly fabricated, accurately and completely
shop fitted and assembled.

Delivered on time.

WILLAMETTE IRON & STEEL WORKS
PORTLAND, OREGON, U. S. A.

PACIFIC COAST PAPER IMPORTS—JUNE, 1929

	Newsprint		Printing Papers		Writing & Drawing		Greaseproof		Wrapping		All Other Paper
	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
To LOS ANGELES—											
From Sweden	60,830	2,350,269							1,555	37,390	
From Canada	160,759	4,881,445									
From Finland			2,392	56,173							
From Japan			109	254	240	583					720
From France					270	206					648
From Italy					12	25					
From China											83
To SAN FRANCISCO—											
From Sweden									252	5,884	
From Canada	122,296	3,828,000									
From Belgium					221	2,253					726
From France					19	24					21,177
From Japan					61	187					1,041
From Germany					1,389	14,612					903
From Italy					5	2			11	240	
From Europe					140	183					579
From China					68	1,203					
To OREGON—											
From France					51	136					153
From Germany											6
From Japan					15	47					
To WASHINGTON—											
From Canada	410,621	4,225,720			26	78					
From Australia					78	150					
From Norway							1,428	21,440			5,752
From Finland											
From France					265	300					200
From Europe											258
From Japan											
Pacific Coast Total	754,506	15,285,434	2,501	56,427	3,860	20,189	1,428	21,440	1,818	43,514	32,246

Total Pulp Imports—June, 1929—All Grades—\$796,359.

"All Other Paper" includes all paper not classified independently above, as well as such semi paper products as paper mache, pulp board and manufactures from paper.

*Much of the news print entered in the Washington customs district from Canada is from British Columbia for interior distribution to points in the Mountain States and Southwestern United States.

PACIFIC COAST PULP IMPORTS—JUNE, 1929

	Pulpwood		Mechanically Ground Pulp		Bleached Sulphite		Unbleached Sulphite		Unbleached Sulphate		Bleached Sulphate	
	Dollars	Cords	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons
To LOS ANGELES—												
From Sweden							36,943	800	93,449	2,000		
To SAN FRANCISCO—												
From Sweden			37,594	900			18,515	400				
From Canada							4,957	183	5,530	188		
To WASHINGTON—												
From Canada			28	2	2,632	34	9,402	206				
Pacific Coast Total			37,982	902	2,632	34	69,817	1,589	98,979	2,188		

Total Pulp Imports—June, 1929—All Grades—\$209,410; 4,713 Tons.

SHIPMENTS OF OVERISSUE NEWSPAPER

From Pacific Coast Customs Districts, July, 1929

From San Francisco			
Country of Destination—	Pounds	Dollars	
Central America	93		
China	451,920	4,231	
Orient	908,040	11,200	
Japan	70,280	703	
Philippines	70,000	680	
Oceania	14,908	209	
Total	1,515,241	17,975	
From Los Angeles			
Orient	1,317,120	13,042	
China	3,367,010	32,394	
Japan	500,000	4,922	
Philippines	682,000	8,051	
Total	5,866,130	58,409	
From Washington			
Orient	44,700	440	
Total Coast Shipment	7,426,071	76,824	

Seek Eastern Markets For Sanitary Lines

L. J. Arms, salesmanager of the National Paper Products Co., San Francisco division, stopped in Portland, Seattle, Tacoma and Spokane en route east during the middle of September.

Mr. Arms is making a complete swing through the East in the interest of No-Waste Toilet Tissue, Public

Service Towels and other sanitary specialties handled by the National Paper Products Co.

He was accompanied east by Vaughan Morrill, vice-president of the Zetex Corp., distributors of Zetex and Slip-Away self-disposing sanitary toilet seat covers. These two new products are manufactured by the National Paper Products Co. and the Zetex Corp. of Tacoma, San Francisco and New York, are sole selling agents for the line in the United States.

Jobbers are taking to the Zetex line and distribution is now established in the major markets of the West and Middlewest.

Mr. Morrill will open further distribution on the Atlantic Coast and the territory west to Chicago on his present trip east with Mr. Arms.

Ding Dong Wedding Bells

Three Crown Willamette men at the West Linn mill stepped into double harness in September.

Walter K. Reeve, assistant office manager, married Miss Cecilia Bloomquist of Chico, Calif.

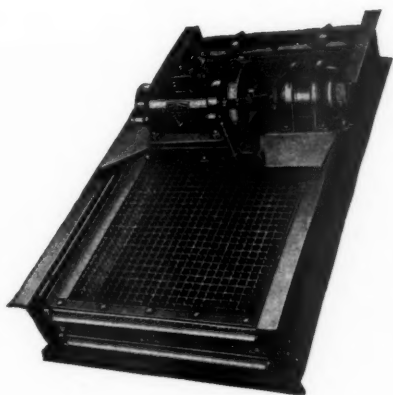
Rufus Gay, pulp mill superintendent of the East Side pulp mill, married Mrs. Corinne Henningsen.

Willard Smith Boutwell, chief electrician, married Miss Gladys Blanche Harbe of Portland.

Only the Screen Cloth Vibrates

THE
Leahy

Frame is Stationary



*No Undue
Crystallization
or Breakage
of Screen Cloth*

Screen cloth suspension in vibrating screens is of utmost importance. Common forms of applying screen jackets sidewise or endwise by rigid clamping or tensioning, result in undue crystallization and breakage at the point of fastening.

The LEAHY NO-BLIND VIBRATING SCREEN employs a free swinging screen jacket assembly—the only part that vibrates. The screen jacket is firmly held between upper and lower mounting bars. The zero point of vibration is *not at the point of attachment* to these bars, *but is removed well beyond the screen jacket* to knife edges, thus insuring vibration to the very ends of the screen surface and carrying the line of flexure to well designed fulcrum points of the screen cloth. A replacement can be made in ten minutes' time.

The principles of the Leahy NO-BLIND Screen are protected fundamentally by Reissue Patent No. 16,701, reissued August 9, 1927.

*For Complete Information on the Leahy
Screen or on Your Conveying Problems, write*

WEBSTER-BRINKLEY CO.

SEATTLE, WASHINGTON

Manufacturers and Engineers of Conveying, Screening, Elevating and Transmission Machinery

When writing WEBSTER BRINKLEY CO., please mention PACIFIC PULP AND PAPER INDUSTRY

PACIFIC COAST PAPER EXPORTS—JULY, 1929

	Newsprint		Printing		Writing		Greaseproof		Wrapping		Tissues	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
From LOS ANGELES—												
To Mexico	140	14			1,502	281			5,352	319	3,428	454
To Australia									6,299	450		
To China									4,642	540		
From SAN FRANCISCO—												
To Canada			2,357	732							341	65
To Mexico					80	16			31,651	3,228	428	237
To Philippines	31,206	1,080			468	91					9	1
To Japan	57,364	1,821	2,749	361							2,041	312
To China	115,350	3,887			1,499	233			2,206	136	599	42
To Oceania	360	23	50	25					4,301	267	1,556	250
To Colombia	5,002	160									225	25
To Orient					495	346					215	24
To South America											31	4
To Venezuela					16,831	1,035			11,206	661		
To Central America	21,463	834			200,094	10,739	452	72	4,147	256	3,258	393
From OREGON—												
To Japan	56,464	1,791			6,354	296			3,491	234		
To Philippines	474,989	16,569			239,373	10,965			371,745	16,522		
To Australia	16,059	852			229,790	10,981						
To Orient					16,158	808						
To China	247,012	8,149			30,298	1,523						
From WASHINGTON—												
To Canada			66,568	4,122	5,447	1,049	472	127	644	476	8,951	666
To Mexico			37,076	2,140							3,875	245
To Philippines	126,715	3,663	125,036	6,606			783	1,120			8,820	663
To Peru									39,574	1,735		
To China			919,137	55,150					290	104		
Pacific Coast Total	1,152,124	38,843	1,152,973	69,136	748,389	38,363	1,707	1,319	485,548	24,928	33,877	3,404

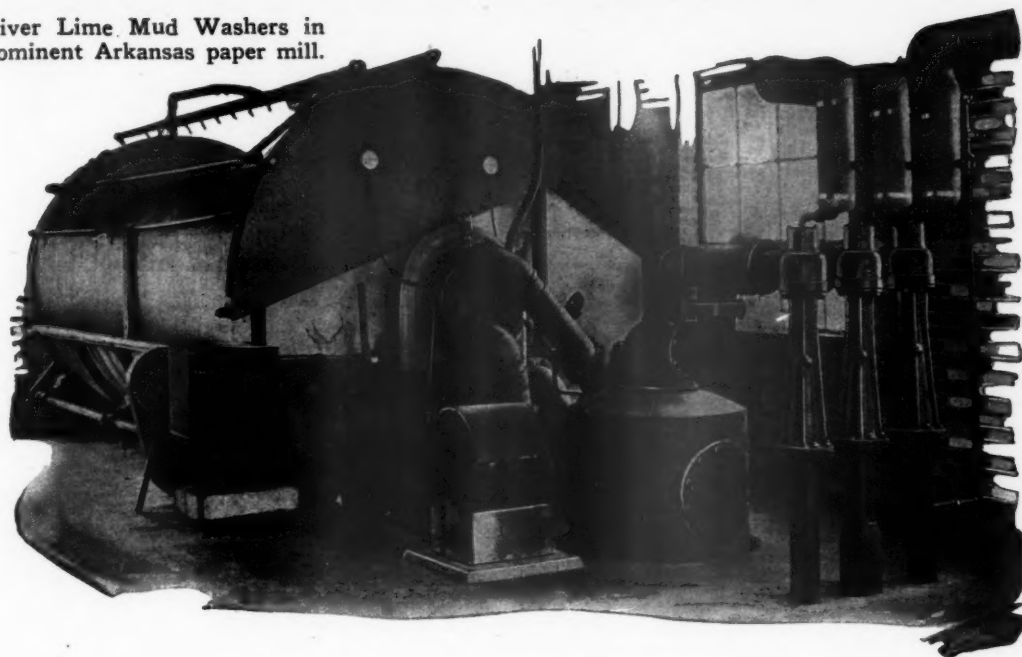
	Board		Building		Boxes & Cartons		Paper Bags		Converted Paper Products		Miscellaneous Paper & Prod.	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
From LOS ANGELES—												
To Mexico	4,588	253	1,395	92	560	56	2,492	175	829	626		899
To Central America							6,249	580				
To Argentina			24,554	754								
To Chile			1,750	46								
To China			99,180	2,083								429
To Orient												45
To Australia			45,988	1,544								380
From SAN FRANCISCO—												
To Canada	6,130	1,066	3,320	255	3,379	233	760	171	2,515	597	2,047	
To Mexico	503	137	2,428	90	150	12			44	12	370	
To Central America					200	100	27,071	1,966	1,844	1,022	380	
To Argentina			1,224	32								
To Peru			10	2								312
To Chile							3,867	206				
To Colombia							8,170	833	70	81	15	
To South America										24		
To Orient			18,000	618								151
To China	954,859	21,400	70,000	1,916					678	405	2,125	
To Japan	2,348	423	17,500	867					560	183	1,509	
To Europe	73,501	2,225	10,700	616								91
To Oceania			2,500	90			1,849	852	85	52		
To Philippines			400	60	34,900	1,660	7,820	530	176	30	2,282	
To Australia	474,927	14,064	119,027	5,178	283	33	117	8	368	174	7,703	
From OREGON—												
To Peru							285,161	16,299				14
To Colombia							4,350	349				
To Chile							3,784	232				
To South America							3,413	197				
To Orient							1,304	81				
To China	889,560	18,235										
To Philippines							285,161	16,299				
From WASHINGTON—												
To Canada	207,827	7,598			3,795	327	625	65	3,157	1,092	3,198	
To Australia	35,186	1,143										
To Europe												1,004
To China					1,882	227			130	68	121	
To Japan					180	177			1,142	224	294	
To Orient												97
To Philippines									5	3	6	
Pacific Coast Total	2,649,429	66,544	417,976	14,243	45,329	2,825	642,193	38,843	11,604	4,593	23,473	

Total All Paper Exports for Month of July, 1929..... 3,675 tons; \$326,514
 Total All Paper Exports for Month of June, 1929..... 3,344 tons; 287,719
 Total All Paper Exports for Seven Months, 1929..... 19,883 tons; \$1,890,928

CLASSIFICATIONS—For convenience of presentation, some classifications have been combined, as follows: "printing," includes book (not coated), cover and surface coated paper; "greaseproof" includes water-proof; "tissues" includes crepe, tissue, paper towels, napkins and toilet; "board" includes boxboard, bristol, bristolboard and other paper board and strawboard; "building" includes sheathing, and other building paper; "writing" includes fancy papeteries and other writing; "converted paper products" includes envelopes, cash register rolls, index file and other office

forms; "miscellaneous" includes blotters, paper hangings, vulcanized fibre sheets, strips, rods and tubes, manufactures of vulcanized fibre and other paper products. COUNTRIES—Under the classification "Central America" are included all of the Central American countries and Cuba. "South America" includes only the following South American countries: Ecuador, Paraguay, Bolivia, Uruguay, and the Guianas; other South American countries are classified separately. "Orient" includes all the Asiatic countries with the exception of China and Japan, which are separately classified. New Zealand is included under "Australia."

Oliver Lime Mud Washers in prominent Arkansas paper mill.



The Significance of These Recent Orders

- ... 5 Save Alls
- ... 2 Deckers
- ... 2 Brown Stock Washers
- ... 2 High Density Thickeners
- ... 3 Bleach Washers
- ... 2 Lime Mud Filters
- ... 1 Pulp Washer
- ... 1 Board Machine

DURING May and June, paper mills not only in the States and Canada but in Sweden and Japan ordered the above listed Oliver United units.

The significance is not so much in the total number of units as in the different purposes for which they are to be used.

Oliver United units improve operation at every step or process in paper mill work where stock is thickened or washed, where fibers must be saved from white water, where laps of stock are processed, where lime mud is treated.

It is no wonder that total sales of Oliver United units mount higher and higher as the months go by.

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Halle, Germany, Wilhelm Lill
Recife, Brazil, Ayers and Son.

Tokyo, The American Trading Co.
Manila, E. J. Nell and Co.
Scheveningen, Holland
Soerabaya, Java

Melbourne, Fyvie and Stewart
Timmins, Ontario, B. D. Kelly

Van Lelyveld and Co.

Factories: Oakland, Calif.; Hazleton, Penna.

Cable Address: OLIUNIFILT

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of Pacific Pulp & Paper Industry, published monthly—except in March, when publication is semi-monthly—at Seattle, Washington, for October 1, 1929.

State of Washington, County of King,—ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Lawrence K. Smith, who having been duly sworn according to law, deposes and says that he is the business manager of the Pacific Pulp & Paper Industry, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.

Editor, Lloyd E. Thorpe, 71 Columbia St., Seattle, Wash.

Managing editor (none).

Business manager, L. K. Smith, 71 Columbia St., Seattle, Wash.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.

Miller Freeman, Daniel E. Pratt, Lawrence K. Smith, W. E. Crosby, G. W. Cain, all of 71 Columbia St., Seattle, Wash.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in case where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stocks, bonds, or other securities than as so stated by him.

LAWRENCE K. SMITH, Business Manager.

Sworn to and subscribed before me this 23rd day of September, 1929.

(Seal)

RALPH H. MOULTON.

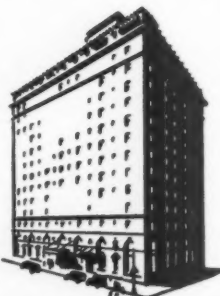
(My commission expires June, 1932.)

Management Bond Goes East

One of the biggest shipments of bond paper yet to be shipped out by the Grays Harbor Pulp & Paper Co. was loaded on the S. S. Charles H. Cramp early this week for shipment to the East Coast.

The consignment consisted of 1,500,000 pounds of "Management Bond," the name given to the mill's bond paper, a product of Hammermill technical control. If present plans are carried out, it is probable that nearly the entire production of the new bond distributed by the Hammermill company will be manufactured in the Hoquiam mill, only a small amount being produced in Erie, Pa., for consumption in that immediate district.

New Washington Hotel SEATTLE



Home-like Comfort

Excellent Food

"In the Heart of
Everything"

Rooms all with bath
From \$3

SECOND at STEWART

When writing to advertisers please mention PACIFIC PULP AND PAPER INDUSTRY



IS YOUR BARKING CAPACITY GUARANTEED?

The U-Bar Barking Drum is guaranteed for two years at a minimum speed of 7½ R.P.M. (10 ft. diam.) running half-full of wood at an average of 3,000 working hours per year. This is all in addition to the usual guarantee of workmanship and materials.

HOW THE U-BAR GUARANTEE INSURES BIG PRODUCTION

This guarantee insures BIG and sustained production. Three factors govern capacity: Interior Surface, Volume and Speed. Examine the U-BAR Drum from these angles:

1. *Interior Surface:* U-BARS bark more quickly and cleanly with no unnecessary loss of wood fibre.

2. *Volume:* You can keep a U-BAR Drum HALF-FULL of slabs or logs all the time—a 10'x30' U-BAR Drum, for instance, carries a working load of five cords of wood. Think of it!

3. *Speed:* 7½ R.P.M. are guaranteed in the U-BAR Drum and many mills increase their capacity greatly by stepping this up to 10 R.P.M. Speed is important.

When you consider barking drums, insist on a capacity guarantee.

THE MORTERUD SYSTEM

Production records of the Union Bag and Paper Mills attest to the efficiency of the Morterud System of Indirect Soda and Sulphate cooking. It produces an even cook and a greater yield with forced circulation of preheated liquor. Steam is not introduced directly into the digester but circulates through a series of seamless steel pipes and the condensed water is pumped back to the boilers. Therefore there is no dilution in digester and less steam is used in the evaporation of liquor.

THE GIANT NEKOOSA BARK PRESS

Make a steam generating asset out of your bark disposal problem with this wonderful Bark Press. It reduces the water in bark to 55% bone dry—which is almost natural water content. Simple operation. Strong and rugged construction. Surprisingly great economies result from the use of this machine.

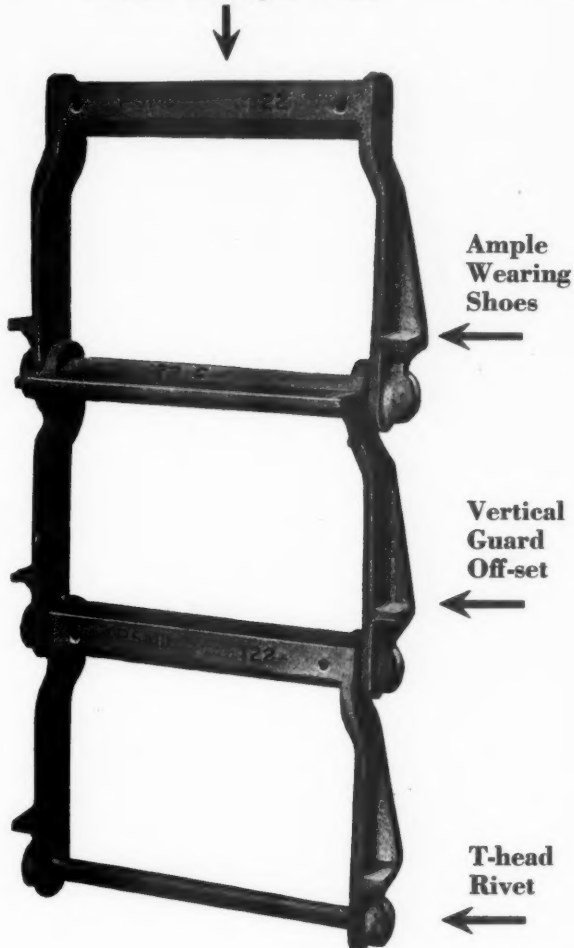
Full Details Sent on Request

Fibre Making Processes, Inc.
CHICAGO, U. S. A.

Canadian Barking Drum Co., Ltd., Drummond Bldg., Montreal

BARKING
U-BAR
DRUMS

Vertical Conveyor Front



- 1** Here is correct design, sound engineering that makes the whole conveyor system *function* with the ultimate minimum of interruption and care.
- 2** And here is superior material. Strength to the core; toughness all through the link and rivet; ductility; and a surprising rust-resistance.

We supply ALL chain needs promptly. And we have helpful engineering aid at your service.

Puget Sound Machinery Depot

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P.S.M.D.

P.S.M.D.

P.S.M.D.

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Big Merger of Swedish Pulp Firms

An agreement between the A.-B. Svenska Handelsbanken and the A.-B. Kreuger & Toll ("The Match Trust") has brought together in Sweden a holding company controlling 20% and 15%, respectively, of Swedish exports of pulp and sawn timber. Total capacity of the mills in the group is about 450,000 long tons of pulp and paper, not including a new sulphate mill, and 150,000 standards of sawn and planed timber. The mills going into the combine, with their capacities and timber holdings, follow:

	Sulphite Tons.	Sulphate Tons.	Mechanical Dry Tons	Sawn Timber Stds.	Forests Hectares
Bergvik-Ala	45,000	40,000	.....	20,000	375,000
Skonvik	36,000	.....	33,000	30,000	300,000
Sund	38,000	.....	.....	18,000	160,000
Svartvik	57,000	.....	.....	25,000	163,000
Nyhamn	21,000	.....	.....	.....	.....
Torpshammar .....	.....	.....	19,000	.....	5,000
Bjorknas .....	.....	.....	13,000	.....	53,000
Salsaker .....	.....	.....	.....	9,000	22,000
Holmsund .....	.....	32,000	.....	17,000	120,000
Kramfors	55,000	25,000	.....	25,000	365,000
Total	252,000	97,000	65,000	144,000	(1,563,000)

As for general policy the mills will continue as independent concerns, but sales will be concentrated into a single hand. It is intended, however, to establish intimate relationships between the different mills on matters of forestry, logging, purchasing, and the utilization and enlargement of technical equipment. No mills will be abandoned. To the contrary, a new sulphate mill is to be built in the Sundsvall district.

The combine, controlling a heavy portion of the Swedish exports, will unquestionably be an influential factor in setting policies. Further, it is predicted in Sweden, the merger may lead to other similar consolidations looking toward eventual unanimous action by the Swedish chemical pulp industries in the market as Finland is doing.

Torsten Hernod will be managing director and chief of the holding company. Gunnar Magnuson will be technical director and industrial expert.

Sitka Spruce Mill Ready

As this was written the Sitka Spruce Pulp & Paper Co. expected to turn its first wheels and mark the inauguration of a pulp industry in the Oregon Coast district. This 75-ton sulphite mill will have a sawmill in connection and specialize in pulp from Sitka Spruce, the Pacific Coast's own most prized pulplwood. J. B. Wilt designed and built the mill.

The HOTEL CONGRESS

*The stopping place in Portland
for Pulp and Paper Men.*



Sixth at Main
Street
PORTLAND
OREGON

200 Rooms—200 Baths
Convenient Downtown
Location.
Reasonable Rates Prevail.

LOUIS E. BOGEL, Resident Manager



NOT EVEN RALEIGH'S CLOAK

SIR WALTER RALEIGH'S cloak helped
a queen over the muddy road---

But nothing in the world can bridge the
gap for the pulp when a Fourdrinier wire
gives out!

The liability of a broken wire interrupting
the whole process of paper manufacture
makes it essential that these wires be as de-
pendable and durable as they can be made!

Tyler wires meet these requirements!

For strength of wire---for resiliency---for
firmness of weave and accuracy---for ability
to resist corrosion and abrasion---for all
the qualities which make wires run straight
and true---Tyler wires cannot be surpassed!

Tyler-made looms, wire drawn by a special
process and woven by men of long experi-
ence, assure the dependability of our wires!

The W. S. Tyler Company
Cleveland, Ohio

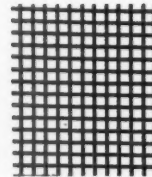
TYLER WIRES



60 Mesh
Fourdrinier Wire

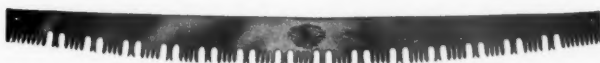


12 x 64 Mesh
Corduroy Cloth

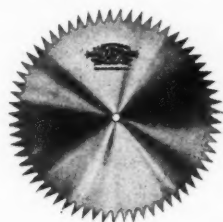


14 Mesh
Cylinder Wire

You Have Never Been Offered Better Saws and Knives than ATKINS Makes

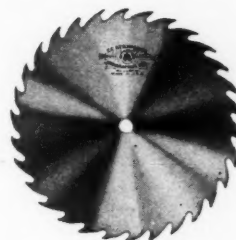


The results obtained from Atkins Silver Steel Cross Cut Saws have amazed the lumber industry. They must cut faster, stay sharp longer and give more satisfaction than any other Cross Cut Saw, because they are SEGMENT GROUND.



It would be a step forward to buy Atkins Slasher Saws if you are not already using them. Their ability to do better work is proven by the demand for ATKINS.

To Produce
Quality and Quantity
Buy ATKINS Saws
and Knives

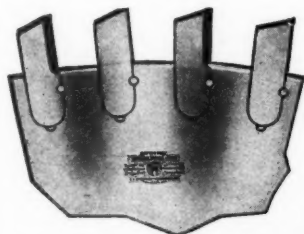


Atkins SILVER STEEL Solid Tooth Circular Saws are made up to a standard of quality, not down to a price. On this qualification we solicit your orders.

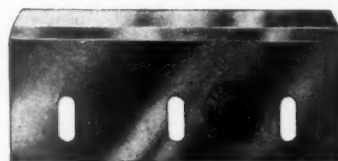
IT PAYS
IN DOLLARS
and CENTS
TO SPECIFY
ATKINS

THE FINEST ON EARTH

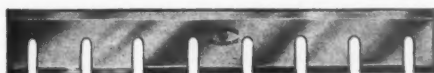
Buy Atkins, improve your quality and raise your production at a lesser cost.



Atkins McLean Pattern Inserted Tooth Saws are the means of lowering costs and are used as standard equipment in mills throughout the Pulp and Paper Industry.

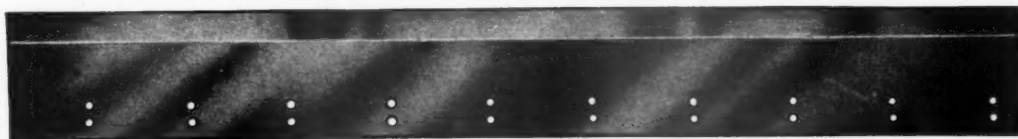


You will have to try Atkins Chipper Knives to readily appreciate what can be accomplished by their exclusive use. They are the best even Atkins can make.



Atkins Knives are used extensively throughout the world where a strict production schedule is enforced.

A Perfect Saw and Machine Knife for Every Purpose



In Atkins Paper Knives you get the results that you have been demanding. They stand up under the most severe tests and retain their keen cutting edge longer than just ordinary knives. Look for the Atkins Name.

Send for Mill Saw and Machine Knife Book
AND COMPLETE CATALOG

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Canadian Factory, HAMILTON, ONT.

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73 First St.,
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109 Powell St.,
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Leading Manufacturers of Saws, Saw Tools, Files, Machine Knives and Grinding Wheels

When writing to E. C. ATKINS & COMPANY, please mention PACIFIC PULP AND PAPER INDUSTRY

Canadian Exports of Pulp and Paper August, 1929

Canadian exports of pulp and paper in August were valued at \$17,449,227, according to the report issued by the Canadian Pulp and Paper Association. This was an increase of \$2,064,896 over the July total and of \$1,885,752 over the total for August, 1928.

Wood-pulp exports for the month were valued at \$4,272,047 and exports of paper at \$13,177,180, as compared with \$3,618,205 and \$11,945,270 respectively in August, 1928.

Exports of the various grades of pulp and paper for August 1929 and 1928 were as follows:

PULP—		Tons	Dollars	Tons	Dollars
		August, 1929	August, 1929	August, 1928	August, 1928
Mechanical	19,606	557,646	17,834	500,216	
Sulphite Bleached	25,989	1,904,507	18,915	1,519,578	
Sulphite Unbleached	19,791	966,515	17,252	840,455	
Sulphate	13,265	767,921	12,000	698,351	
Screenings	4,560	75,458	2,913	59,605	
	83,211	4,272,047	68,914	3,618,205	
PAPER—		Tons	Dollars	Tons	Dollars
		August, 1929	August, 1929	August, 1928	August, 1928
Newsprint	217,638	12,659,566	179,334	11,473,052	
Wrapping	1,474	161,717	1,342	146,730	
Book (cwt.)	6,695	54,818	7,260	56,135	
Writing (cwt.)	692	5,881	642	5,021	
All Other		295,198		264,332	
		13,177,180		11,945,270	

For the first eight months of the current year the total value of pulp and paper exported from Canada amounted to \$130,033,538 as compared with a total of \$124,789,718 for the corresponding eight months of 1928; an increase for this year of \$5,243,820.

Wood-pulp exports for the eight months were valued at \$28,869,844 and exports of paper at \$101,163,694, as compared with \$29,854,839 and \$94,934,879 respectively in the eight months 1928.

Details for the eight months' period are as follows:

PULP—		Tons	Dollars	Tons	Dollars
		Eight Months, 1929	Eight Months, 1929	Eight Months, 1928	Eight Months, 1928
Mechanical	128,438	3,525,118	121,761	3,327,596	
Sulphite Bleached	173,781	13,183,095	166,335	12,589,714	
Sulphite Unbleached	126,852	6,276,353	142,648	7,173,701	
Sulphate	92,253	5,459,557	107,544	6,357,832	
Screenings	24,005	425,721	19,990	405,996	
	545,329	28,869,844	558,278	29,854,839	
PAPER—		Tons	Dollars	Tons	Dollars
		Eight Months, 1929	Eight Months, 1929	Eight Months, 1928	Eight Months, 1928
Newsprint	1,627,631	97,074,303	1,412,170	90,942,977	
Wrapping	10,202	1,105,170	10,713	1,173,549	
Book (cwt.)	50,324	427,167	43,503	358,956	
Writing (cwt.)	3,806	34,309	3,467	31,988	
All Other		2,522,745		2,427,409	
		101,163,694		94,934,879	

Pulpwood exports were higher in August than for some years past but for the first eight months were smaller than for the corresponding months of 1928. Total exports of pulpwood for the period amounted to 933,297 cords valued at \$9,340,714 as compared with 1,110,327 cords valued at \$10,772,138 in the eight months 1928.

The Pulp and Paper Industry in Canada

Canada, thru its Department of Trade and Commerce, Dominion Bureau of Statistics, Forest Products Branch, has just issued from Ottawa a "Report on the Pulp and Paper Industry in Canada, 1928."

"Yesterday an infant, today the head of the family." That just about describes the rise of the industry in Canada. Quoting from the report:

"The pulp and paper industry is the most important manufacturing industry in Canada; heading the lists in 1928 for gross and net values of manufactured products as well as for distribution of wages and salaries. In total capital invested the industry is second only to electric light and power plants and in total number of employees it is second only to sawmills.

"Considering only the manufacturing aspect of the industry, the gross value of production in 1928 was \$233,535,326, an increase of 6.5% over the figure for 1927. The gross value of manufactured products of the industry for the last five years are as follows:

GROSS PRODUCTION

1924	\$179,259,504
1925	193,092,937
1926	215,370,274
1927	219,329,753
1928	233,535,326

"Net production for 1928 was \$145,070,907.

"If operations in the woods are considered, the total value to Canada of the industry as a whole may be considered as the sum of the values of pulpwood and pulp exported and the gross value of the paper products. This total in 1928 amounted \$245,346,839, an increase of 6.1% over 1927.

"There were 110 establishments in operation during 1928 as compared to 114 in 1927. Of these mills 33 made pulp only, 46 were combined pulp and paper mills, and 31 made paper only."

Interesting figures:

79 mills produced 3,610,724 tons of pulp valued at \$121,458,078.

77 mills produced 2,849,687 tons of paper valued at \$168,445,548.

861,744 tons of pulp produced for export valued at \$43,364,393.

84.7%, or 2,414,393 tons, of all paper made was newsprint.

Total capital invested in manufacturing part of industry—\$685,687,459.

(Includes only investment in mills operating in 1928.)

33,614 employees on salaries or wages,

\$47,322,648, total payroll.

6,323,610 cords, valued at \$74,818,467, total production of pulpwood.

1,532,266 cords, valued at \$15,269,660, exported to United States.

\$45,614,823 worth of pulp actually exported.

\$147,156,792 worth of paper and paper goods actually exported.

Reviewing the industry as a whole these inferences are drawn:

Exportation of unmanufactured pulpwood decreasing; pulp manufacture increasing; pulp manufactured for export decreasing; paper manufacture increasing in volume and value.

All of which point to the broad general tendency toward the complete and profitable utilization in Canada of raw and partly manufactured materials.

Hooker Electrochemical Brochure

A handsome copyrighted brochure is being distributed by Hooker Electrochemical Co. It is a publication which should have value as a permanent reference. In addition to brief but thorough descriptions of the company's organization, services, plants and offices, there are reference features such as atomic weights, conversion factors, temperature conversion tables and other useful data.

Excellent typography and liberal use of well chosen illustrations are characteristic features of the brochure. Perusal of the work is the next best substitute to a personal visit to the company's properties.

Reference to the recently completed Tacoma plant is made in the following terms:

"In recent years the Pacific Northwest has developed a rapidly growing pulp industry which now requires substantial quantities of liquid chlorine for bleaching. To most efficiently serve this need and the increasing local requirements, our new plant at Tacoma, Washington, has recently been completed."

Simple and Speedy

REED Plunger Type Stock Valve

PATENTS PENDING

A single action valve that is accepted as standard equipment in several of the largest Pacific Coast mills, where numerous installations are demonstrating their superiority day in and day out under the most exacting conditions.

These and Other Features Recommend the REED Valve



- Quick opening and closing.
- Will not stick.
- Self cleaning.
- Can be drained or washed out when in use.
- Operating lever can be locked in any desired position.
- Constructed with full-size pipe opening.
- Manufactured in sizes from 4-in. to 20-in.

Further information on request.

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Builders of Pulp and Paper Mill Machinery

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San Francisco Portland Seattle

News Print Production In August

Production in Canada, according to the News Print Service Bureau, during August 1929 amounted to 225,873 tons and shipments to 224,254 tons. Production in the United States was 120,868 tons and shipments 118,789 tons, making a total United States and Canadian news print production of 346,741 tons and shipments of 343,043 tons. During August, 22,758 tons of news print were made in Newfoundland and 1,544 tons in Mexico, so that the total North American production for the month amounted to 371,043 tons.

The Canadian mills produced 220,049 tons more in the first eight months of 1929 than in the first eight months of 1928, which was an increase of 14 per cent. The United States output was 14,612 tons, or 2 per cent less than for the first eight months of 1928. Production in Newfoundland was 15,770 tons, or 10 per cent more in the first eight months of 1929 than in 1928 and in Mexico 1,975 tons more, making a total increase of 223,182 tons, or 8 per cent over the same period in 1928.

During August the Canadian mills operated at 80.5 per cent of rated capacity, United States mills at 79.8 per cent and Newfoundland mills at 107.0 per cent. Stock of news print paper at Canadian mills totalled 29,785 tons at the end of August and at United States mills 25,656 tons, making a combined total of 55,441 tons, which was equivalent to 3.5 days' average production.

NORTH AMERICAN PRODUCTION

	Canada	United States	Newfoundland	Mexico	Total
1929—August	225,873	120,868	22,758	1,544	371,043
Eight Months	1,766,216	930,169	167,652	12,726	2,876,763
1928—Eight Months	1,546,167	944,781	151,882	10,751	2,653,581
1927—Eight Months	1,340,234	1,021,037	133,476	9,669	2,504,416
1926—Eight Months	1,219,335	1,123,658	117,065	8,227	2,468,285
1925—Eight Months	990,343	1,005,842	49,563	8,589	2,054,337
1924—Eight Months	907,693	991,523	43,439	7,664	1,950,319
1923—Eight Months	840,876	1,014,811	42,872	8,000	1,906,559

U. S. Pulp and Paper Production July, 1929

According to identical mill reports to the American Paper and Pulp Association, paper production totaled 554,047 tons in July, 1929 as compared with 557,746 tons in June, 1929, and 495,272 tons in July, 1928.

All grades, excepting bag and wrapping papers, registered increases over last year's record in the month's output. Paperboard production showed an increase of 18% over July, 1928, and felts and building paper increased 17%, hanging paper 23%, tissue paper 22%, writing paper 18%, uncoated book paper 15% and newsprint 2%. Production of bag and wrapping paper, however, decreased in July, 1929, as compared with July, 1928, by 2 and 4 percent respectively.

The July, 1929, shipments of all grades, excepting wrapping paper, increased over the July, 1929 records and the total shipments of all grades combined were 10 percent above the corresponding total of last year.

All grades, excepting uncoated book, paperboard, felts and building and hanging papers, registered decreases in inventory at the end of July, 1929, as compared with June, 1929. As compared with July, 1928, all grades, excepting paperboard, felts and building and hanging papers, likewise showed substantial decreases in inventory. The total stock on hand for all grades decreased 1 per cent from June, 1929, and 8 per cent from July, 1928.

Identical pulp mill reports for July, 1929, indicated that the total production of all grades of pulp was 11% greater than for July, 1928.

During July, 1929, 14 per cent more groundwood, 23

per cent more easy bleaching sulphite and 13 per cent more bleached sulphite were consumed by reporting mills than in July, 1928. Shipments to outside markets in July, 1929, exceeded similar shipments made in July, 1928, by 46 per cent in mitscherlich sulphite, 4 per cent in sulphate and 2 per cent in soda pulp. The total shipments of all grades of pulp in July, 1929, exceeded the July, 1928, total by 4 per cent.

All grades, excepting bleached sulphite, easy bleaching sulphite and sulphate pulp, showed decreases in inventory at the end of July as compared with end of June, 1929. As compared with July, 1928, all grades, excepting groundwood, bleached sulphite, and easy bleaching, registered decreases in inventory.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF JULY, 1929

GRADE	Production Tons	Shipments Tons	Stocks on Hand End of Month— Tons
Newsprint	111,578	112,616	23,603
Book, Uncoated	84,685	84,452	38,319
Paperboard	214,414	212,966	66,560
Wrapping	47,860	48,693	49,206
Bag	13,750	14,577	9,021
Writing	30,099	29,296	38,066
Tissue	12,693	12,480	9,807
Hanging	4,766	4,288	5,105
Felts and Building	7,197	6,665	1,969
Other Grades	27,005	28,022	19,744
Total—All Grades	554,047	554,055	253,400

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF JULY, 1929

GRADE	Production Tons	Used During Month—Tons	Shipped During month—Tons	Stocks on Hand End of Month— Tons
Groundwood	80,134	86,644	2,447	111,140
Sulphite News Grade	36,747	34,113	3,216	7,092
Sulphite Bleached	24,515	22,009	2,373	2,890
Sulphite Easy Bleaching	3,363	3,060	89	702
Sulphite Mitscherlich	7,034	5,920	1,149	585
Sulphate Pulp	29,462	23,051	5,640	5,282
Soda Pulp	24,300	15,680	9,064	4,274
Pulp—Other Grades	29	.....	19	19
Total—All Grades	205,584	190,477	23,997	131,984

Packing Sugar In Paper Bags At Refinery

Opening up a tremendous new field for paper bags, big sugar refiners are beginning to see the wisdom of packaging their granulated product in 2-, 5- and 10-pound paper bags at the refinery.

Chain stores have had much to do with changing the buying habits for the consumer and changing them, effecting in turn other changes all the way back the line to the producer.

The refineries have swung in line with the idea of ready-packaged goods. The sugar-filled bags are packed in cartons. Thus passes with the old open cracker barrel one more symbol of yesterday's grocery store.

The new method of paper-packaging at the refinery eliminates shrinkage arising through leaky and damp cloth sacks, removes the operation of packing and weighing from the grocery counter to the refinery where it can be done by machine much more conveniently and efficiently, and positively keeps hands out of the sugar from refinery to consumer.

IMPORTS OF PULP WOOD AND WOOD PULP INTO THE UNITED STATES BY COUNTRIES

JUNE, 1929

Compiled by the U. S. Department of Commerce Bureau of Foreign and Domestic Commerce
(Figures Subject to Revision.)

COUNTRIES	PULP WOOD											
	Rough				Peeled				Rosed			
	Spruce Cords	Dollars	Other Cords	Dollars	Spruce Cords	Dollars	Other Cords	Dollars	Spruce Cords	Dollars	Other Cords	Dollars
Canada	42,368	456,310	5,347	52,775	81,119	993,649	10,571	95,393	1,632	19,793	.....	.....
Total	42,368	456,310	5,347	52,775	81,119	993,649	10,571	95,393	1,632	19,793	.....	.....

COUNTRIES—	WOOD PULP											
	Mechanically Ground		Chemical Unbleached Sulphite		Chemical Bleached Sulphite		Chemical Unbleached Sulphite		Chemical Bleached Sulphite		All Other Wood Pulp	
	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars
Austria .....	.....	.....	.....	.....	350	24,876	.....	.....	.....	.....	.....	.....
Czechoslovakia .....	.....	.....	212	11,171	70	5,296	.....	.....	.....	.....	.....	.....
Estonia .....	.....	.....	25	1,280	.....	.....	.....	.....	.....	.....	.....	.....
Finland	623	16,352	9,849	475,594	884	66,408	1,433	68,354	1,388	108,953	.....	.....
France .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	6,689
Germany .....	.....	.....	1,079	62,731	3,204	245,333	.....	.....	.....	.....	.....	.....
Lithuania .....	.....	.....	750	39,748	.....	.....	.....	.....	.....	.....	.....	.....
Norway	400	5,177	1,124	63,130	5,248	412,320	1,424	64,955	25	1,978	.....	.....
Poland and Danzig .....	.....	.....	.....	.....	.....	.....	201	9,327	.....	.....	.....	.....
Sweden	1,001	39,988	36,715	1,900,536	3,934	308,476	30,723	1,568,869	25	1,159	.....	.....
Canada	19,417	478,319	14,041	659,623	16,115	1,238,255	8,100	494,976	542	51,170	419	31,513
Total	21,441	539,836	63,795	3,213,813	29,805	2,300,964	41,881	2,206,481	1,980	163,260	442	38,202

Total imports of all grades of pulp for June, 1929—159,344 tons; \$8,462,556.

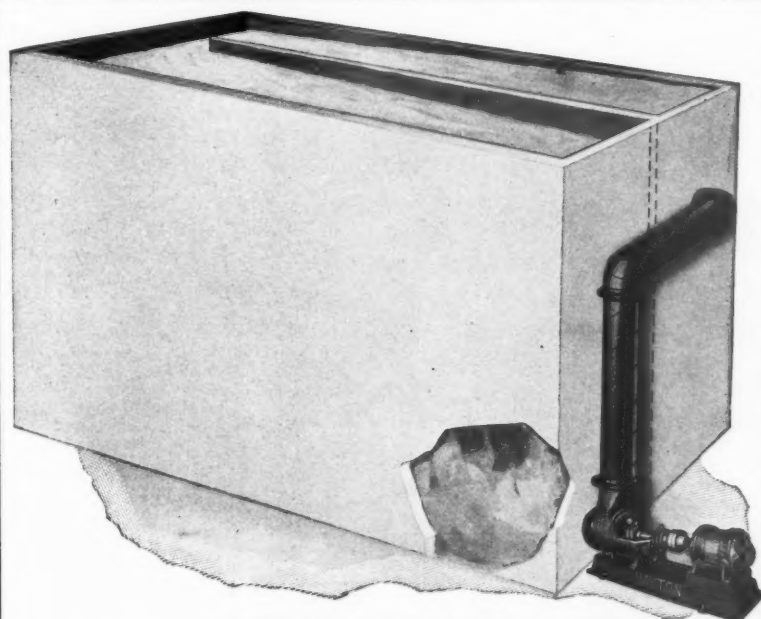
Murray Expected To Visit Tacoma

Vice-president E. B. Murray, in charge of operations of the Union Bag & Paper Power Corp., who is expected to visit Tacoma, had not yet arrived early in October and it was not known definitely when he would come West.

Hardy Ferguson, New York consulting engineer,

who designed Union Bag's Tacoma mill, who was reported to have been scheduled for a conference with Mr. Murray while on the Coast, has returned to New York.

There are many street rumors about possible expansion of the Tacoma mill but all are without confirmation.



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We have these working on kraft, sulphite, soda, ground wood, diffuser stock, blow pit stock, and screenings.



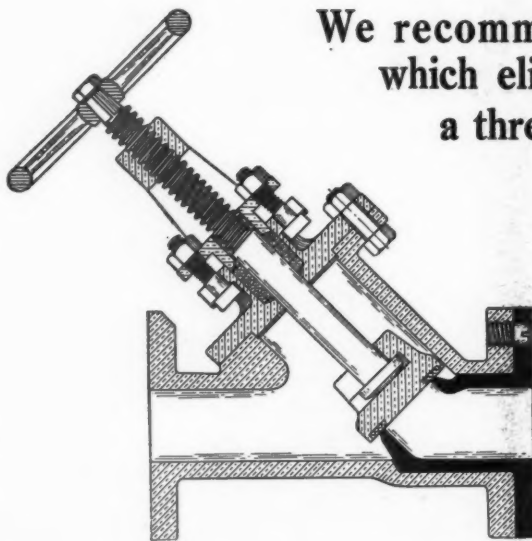
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